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Infantry

January-February 1996



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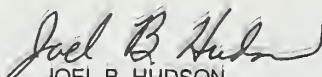
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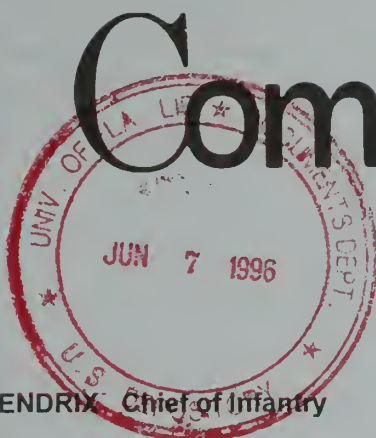
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COVER: Whether light or heavy, the infantry force has always had to close with and destroy the enemy, often on his own terrain. This issue's cover is taken from a photograph of U.S. Infantrymen operating in the Central Highlands of Vietnam, and reflects yet another of the varying environments under which tomorrow's infantry will have to operate.

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Commandant's NOTE

MAJOR GENERAL JOHN W. HENDRIX, Chief of Infantry

THE WARNET PILOT—TRAINING WITH TECHNOLOGY

In previous Commandant's Notes, I have highlighted the technological progress, initiatives, and materiel improvements that will support Infantry Force XXI as it faces the challenges of the next century. Computer-based training is not simply the way of the future: it is here now, and at Fort Benning—as across the Army—we are incorporating 21st century technology into how we train the force to meet tomorrow's challenges.

Fort Benning has been designated as the Training and Doctrine Command (TRADOC) proponent for the WARNET pilot, and in this Note, I want to talk about that initiative, a total Army effort within Force XXI that will enable us to structure and execute the kind of Army-wide training that will permit our soldiers to fully exploit the capabilities of the most advanced weapons and equipment our Nation has ever fielded.

The WARNET pilot team at Fort Benning was formed within the Infantry School's Directorate of Operations and Training, with the support of the National Guard Bureau, to synchronize the development and fielding of new technologies in training, and to prepare the infantry proponent course materials to be taught using those new technologies. At other TRADOC installations, proponent schools are likewise responsible for the development and delivery of courses in their own subject matter areas.

Earlier initiatives such as WARFIGHTER XXI, WARNET XXI, and WARRIOR XXI have focused on research for new battlefield technologies, new equipment training to support those technologies, and the tactical employment of new technology weapons. The WARNET pilot addresses an equally critical aspect of our profession: developing and applying the systems and methodologies that will facilitate the training of the infantry force on the doctrine and equipment we will rely upon as we execute a diverse array of missions.

The WARNET pilot reflects a multi-faceted approach to training that will draw upon simulations, distributive training, distributive interactive simulations, multimedia distance learning, and interactive courseware to ensure that we can both achieve and sustain the levels of proficiency necessary for the infantry force to accomplish its mission. All of these methodologies support the Total Army School System (TASS). At the same time, we must accomplish this within the austere budgets and constrained resources that will remain realities even as we prepare to meet the demands of the next century.

It is significant that the National Guard Bureau is a part of this effort, because the training and standards of Guard infantry units and their active Army counterparts must be qualitatively indistinguishable. In the coming months, you will hear references to *seamless* training; that is, training whose end product is a technically proficient, combat-ready National Guard or active Army infantryman who can deploy and complete his mission. To support this initiative, new technology training products and methodologies will first be delivered to Experimental Force (EXFOR) units at Fort Hood, Texas, for test and analysis, and then distributed Army-wide.

One of the first tangible products of this effort will be the Total Army Training System Courses (TATSCs) developed by each of the proponent branch schools under the TRADOC TASS initiative. The overall purpose of TATSC development is to create courseware that draws upon available technology to enable the student to derive maximum learning with a minimum of resident school attendance. This active-component effort will benefit the total Army through its standardization of the subject matter and phasing of course material and instruction.

A typical course may consist of multiple phases, such as a CD-ROM (computer disk, read-only-memory) phase

with interactive instruction, paper-based lessons, and computer-based testing; a teletraining network (TNET) phase using a video classroom with practical exercises, conventional instruction, and paper-based testing; and a resident phase that incorporates practical exercises with hands-on training and testing.

Course development for TASS will be executed in two phases:

Phase 1—consisting of four steps—will concentrate on the development of several short courses for test and analysis. Within this phase, the first step will involve immediate course conversion with TNET and distance learning applications. The second step will consist of long-term course development that includes computer-based testing, interactive courseware, and multimedia distance learning assets. The third step will consist of simultaneous course development and the management of multi-course programs. The final step will involve the testing and refinement of existing courses while new courses continue to be developed.

The second phase of TATSC course development will draw upon the latest teaching methodology, state-of-the-art equipment, and interactive capabilities to produce complete interactive courseware that includes pre-instruction, instruction, and post-instruction packages. The pre-instruction packages will contain read-ahead packets, VCR instructional tapes, paper-based practical exercises, computer-based/compact disc (CD) practical exercises, and instructions on how the student will interface with instructors over the INTERNET/World Wide Web (WWW).

Five short courses have been selected for production and development under Phase 1: the Tactics Certification Course (TCC), the TAC (Teach, Assess, and Counsel) Officer Training and Orientation Course, the Instructor-Trainer Course, the Infantry Mortar Leader Course, and the Bradley Fighting Vehicle Leaders' Course.

The selection of TCC as one of the Phase 1 prototype courses was based on two criteria: First, all course instructors for the officer candidate school (OCS) and career management field (CMF) 11 must be TCC qualified. To establish a base of instructors for the implementation of TASS in the seven regions designated by TRADOC, this course was the logical choice as the first to be developed. Second, the course selected as a prototype had to be relatively narrow in scope, so that the feasibility of the technology and concept could be evaluated

without the process becoming inordinately lengthy and complex.

The TCC could give the Infantry School the data base and experience upon which to structure future course development. TCC was selected over a longer course—such as the 20-week Infantry Officer Advanced Course—because its six-day resident phase program of instruction (POI) could be reduced to a shorter resident phase and/or a nonresident phase using distance learning type technology such as CD ROM, CBT, or TNET. As this initiative is expanded, other courses will follow the same concept.

The instruction package for Phase 2 will consist of video teletraining capabilities, multimedia classrooms linked by fiber optics, resident institutional training, on-line INTERNET/WWW instruction with instructor/student interface, and off-site instruction and testing. Lastly, the post-instruction package will offer the student compact discs, access to Army Training Digital Library assets, workbooks, quick-reference cards and charts, VCR instructional tapes, and instructional updates on the INTERNET/WWW.

The initial cost of bringing the WARNET pilot team and its computer-based training programs on line will be offset by savings in lesson preparation time, resident phase POI hours, schools away from units, and billeting and other support associated with conventional resident instruction.

Another major advantage of the initiatives I have outlined will be the standardization of course materials and the uniformity of instruction presented to the soldiers. Other nations are interested in computer-based training as well. The British have used it in a number of applications, have found it to be cost-effective, and have determined that students thus trained have greater retention of knowledge and correspondingly greater recall of the graphics and animations presented—precisely the type of results we are seeking.

In these austere times, we must make every penny count as we train the Army to operate and maintain increasingly sophisticated weapon systems and other equipment. Today, readiness does not stop at materiel; it also includes deployability, sustainment, and survivability. The WARNET pilot team and its counterparts throughout the Army recognize this and are hard at work developing training systems that will enable the soldiers of Force XXI to meet the challenges of the future.

INFANTRY LETTERS



THE MEANS HAVE BECOME THE END

The July-August 1995 issue of *INFANTRY* contains a well-written article titled "Eight Steps to Creating Quality Presentation Slides," by Sergeant First Class Mark Kauder (pages 18-19). It is an interesting comment on our times that an article on such a subject is of as much interest to infantrymen as the issue's other articles on combat marksmanship, cordon and search operations, platoon attacks, and the like.

I think it might be appropriate for the Army as a whole to take a hard look at the extremely large role slides now play in our day-to-day operations. It is my humble but fixed opinion that slides have become a distraction and that their production too often consumes energy that could better be used elsewhere.

As a case in point, let me relate a scene I witnessed in which two field-grade officers—both members of the combat arms nonetheless—were engaged in a passionate debate over the advisability of placing two earth-tone colors side by side on a briefing slide. There was no discussion of the content of the slide, the veracity of the data, or the logic of the message. The issue was purely a matter of esthetics.

In a similar incident, a group of operational plans officers threw together a course-of-action brief in a matter of minutes without consulting any other staff section. The result was a visually appealing slide but completely devoid of any analysis, supporting data, or staffing. The slide was received with great raves from higher headquarters, but those involved knew that, like the proverbial emperor, the slide too was naked. Unfortunately, such is the sad state in which we live.

As Sergeant Kauder points out, slides have become a major means of communication in the Army. I say *means* of

communication instead of *aid* to communication, which was their original intent and, I would argue, the limit of their usefulness. Slides simply cannot stand alone any more than a sandtable, a butcher paper chart, or an execution matrix. They are tools the briefer uses to transfer information to his audience. When separated from their briefing, they lose their effect.

Too often, however, this principle is violated, and the slides take on a life of their own. What is supposed to happen is that after the briefing, the briefer writes a memorandum for record that captures the minutes of the briefing and any decisions made or issues raised. That memorandum is then used, along with the slides as backup, to prepare whatever the final product may be. In some cases, the memorandum itself may be all that is required.

Instead, what usually happens is that the slides themselves, most often without any accompanying script, go into the file cabinet or the shared drive from which they can be interpreted in a vacuum, exported out of context, or otherwise misused. These same slides are cut and pasted to construct future briefings without any updating, substantive refinement, or tailoring to the new audience. The result is a superficial, generic, usually unstaffed, and perhaps even inaccurate product.

What makes this situation even more dangerous is not just what slides have become but what they have replaced, which is the written narrative. Slides can only capture highlights. They don't do a good job with details. Details are captured in operation orders, memos, letters, and other media that don't seem to sat-

isfy our visually stimulated society. We just don't seem to have time for these other media anymore.

For what it's worth, I think we are headed in the wrong direction. We have taken a means and made it an end. In the process we have elevated form-over-substance to new heights. It is time to return slides to their proper place and redirect some of that energy toward plain old writing. Until then, I would say we have met the enemy, and he is us.

KEVIN J. DOUGHERTY
MAJ, Infantry
Fort Benning, Georgia

MACHINEGUNS

I was most happy to see the articles by Major James R. Baldwin and Captain Matthew M. Canfield on machineguns and machinegun training in your November-December 1995 issue. Both were informative and timely. (See "*Machineguns in the Infantry*," pages 7-8, and "*Thoughts on the Medium Machinegun for the Light Infantry Company*," pages 9-12.)

I also suggest that *INFANTRY* readers read the Commandant's Note by Major General David E. Grange, Jr., in *INFANTRY*'s January-February 1981 issue. In that note, titled "Machinegun Use—A Lost Art," General Grange offered a number of excellent ideas on how the Infantry can go about improving its machinegun training and its approach to stressing the value of this most important weapon.

ALBERT N. GARLAND
LTC, Infantry
U.S. Army Retired
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The 1995 index to *INFANTRY* is now available. Please send your requests to Editor, *INFANTRY*, P.O. Box 52005, Fort Benning, GA 31995-2005.

MOUNTING A PAQ-4C ON THE M203

The ingenuity of NCOs never ceases to amaze me. I knew that my company would have some extra time on its hands to develop new SOPs and enhance exciting new ones, but I never expected to see 2d Platoon consistently hitting targets at 150 to 250 meters with an M203 grenade launcher at night using the PAQ-4C laser device to direct the rounds.

Sergeant First Class Brent Brodie thought of this innovation as his soldiers were zeroing AN/PVS-4s and PAQ-4Cs on the 25-meter range. I was surprised at how accurate these soldiers were on the M203 range and was convinced it worked after I hit targets myself.

The concept is actually fairly simple. Sergeant Brodie took the adapter normally used for mounting the PAQ-4C to an M60 machinegun and used it to mount the PAQ-4C to the AN/PVS-4 mount on the M203. The adapter comes with every PAQ-4C. He then attached the remote firing device to the back side of the PAQ-4C so the M203 gunner could fire the laser beam from a comfortable position using his left hand. The PAQ-4C was zeroed to the M16 on a standard 25-meter range. Zeroing the M16 brought the laser beam of the PAQ-4C on line with the M203 as well. When the weapon was fired on the M203 range, soldiers hit targets with great accuracy.

We have noted a potential problem with this technique. The PAQ-4C is



mounted on the left side of the weapon, so when the target is acquired, the barrel is actually slightly to the right of the beam. This causes the round to drift farther right as range increases. The AN/PVS-4 night sight has an adjusted aiming point scale in the reticle to make up for this discrepancy, since it has "tested" zeroing techniques for all weapon systems. This problem can be offset using the point of aim (PAQ-4C) and the point of impact (round) method. Using this procedure, figure out the physical distance between the PAQ-4C and the iron sight, and then zero or boresight the weapon at 25 meters (for the M203/M16A2). Another, more accurate method is to "field zero" the PAQ-4C to the M203

at the standard zero range (M203—200 meters). At extended ranges, the point of impact and point of aim will be the same.

While we have not worked all the bugs out of this system, I believe it is worth sharing and experimenting with. I think you will agree when you hear the metallic "clang" of metal on metal as the TPT rounds hit 55-gallon drums shot after shot. I did.

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CPT, Infantry
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101st Airborne Division
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CONTINGENCY METLAND PRE-DEPLOYMENT TRAINING

Under no circumstances should units change their wartime METLs and train specifically for contingency missions. Operations other than war (OOTW) tasks are inherent to the training we already conduct, and only minor adjustments are needed. Many of the OOTW missions units will face are like those they would face in wartime. Leaders will adapt and overcome the differences in dealing with an enemy, foreign nationals, political parties, or the news media.

Having commanded a company in

Haiti, I can say that the following are the most important missions that needed special emphasis on training prior to our deployment:

- Defending a critical site.
- Civil disturbance operations, crowd (news media) control.
- Conduct patrols in MOUT (day/night, mounted/dismounted).
- Conduct cordon and search (snatch).
- Establish checkpoints and roadblocks.
- Establish an IRP/IRC (immediate reaction platoon/company) readiness status.

All the unit training must focus first

on the squad and then the platoon. Company teams can expect to have numerous attachments during missions: Military Police detainee team and dog team, psychological operations, civil affairs, counterintelligence, engineer squad, linguists, battalion tactical command post, scout weapons team (OH-58, AH-1), Bradley platoon, casualty evacuation vehicles, and external truck drivers. Mounted movement may consist of approximately 22 vehicles, which is pretty large for a light infantry company. All of these need to be part of the planning process to ensure communication and the success of the mission. Company com-

manders, executive officers, and first sergeants will have to coordinate the movement of all these pieces and know how to sequence them into the operation to suit the constraints of city streets.

Other tasks to train on when planning for any mission are field sanitation, rules of engagement, background of the culture, and useful key phrases of the language. Additionally units need to be prepared to conduct show-of-force operations, arms control and collection, raids, rescue and recovery operations, and limited humanitarian assistance (Field Manual 7-98, *Operations in Low-Intensity Conflict*).

Because of the situation and threat in Haiti, battalion level operations were not conducted, but a company was always on standby to react to the company on a mission. Negotiations at all levels of command (platoon leader to battalion commander) were required during each mission. The soldiers had to deal with reporters, cameramen, and Haitian nationals approaching the wire barrier. Lieutenants, company commanders, and battalion commanders had to work with linguists, U.S. Embassy staff, State Department officials, and local Haitian officials.

Communication is difficult in a MOUT environment. We used AN/PRC-119 (SINCGARS) and AN/PRC-126 squad radios, and the commander sometimes used an AN/PRC-127. One platoon had purchased voice-activated radios for team leaders and certain members of the squad; these worked extremely well in crowd-control and perimeter security when crowds numbered approximately 5,000 to 7,000. In buildings or other structures, and with overhead wires, the PRC-126 sometimes became useless.

During downtime in base camps, the

training of battle tasks, battle drills, and company METL tasks is essential. These skills keep a unit focused and ready for any mission. For us, rehearsals were always required, with special emphasis on pre-combat inspections and the soldier's load.

All the operations we conducted were part of *peacekeeping*: "operations conducted with the consent of the belligerent parties, designed to maintain a negotiated truce, and help promote conditions which support diplomatic efforts to establish a long-term peace in area of conflict" (Field Manual 100-5, *Operations*). We operated as a peacekeeping force under peace enforcement conditions, thus under the United Nations auspices of Chapter VII.

Viewed from the company commander's perspective, the success of this unit was the establishment of a safe, secure environment in which the Parliament could convene, security patrols, and security for the numerous Ministry buildings. The keys to success for this mission were the high-quality, well-trained soldiers and leaders. We have a warfighting doctrine that adapts to these operations and works at the company level. Finally, the restraint and discipline leaders and soldiers displayed in difficult conditions, while maintaining their composure through adversity, was commendable to this profession of arms.

Operations other than war will be a part of the future of the Army, but the realistic combat training we do now also prepares us well for contingency type missions.

KIRK T. ALLEN
CPT, Infantry
Fort Drum, New York

FIRST INFANTRY DIVISION REUNION

The Society of the First Infantry Division—which is composed of soldiers who served in World War I, World War II, Vietnam, Operation DESERT STORM, and in peacetime—will hold its 78th Annual Reunion, 10-14 July 1996 in Salt Lake City, Utah.

For information, please contact me at 5 Montgomery Avenue, Erdenheim, PA 19038; telephone (215) 836-4841.

ARTHUR L. CHAITT
Executive Director

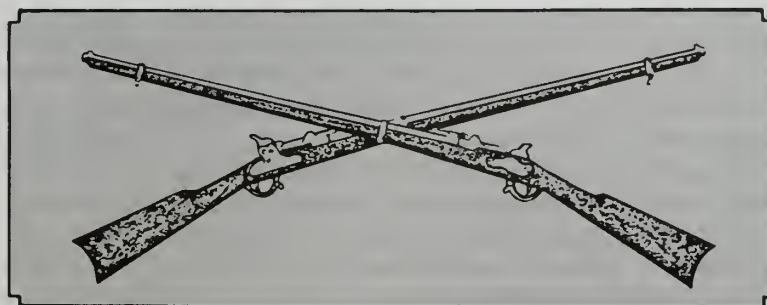
173D AIRBORNE BRIGADE REUNION

The paratroopers of the 173d Airborne Brigade (Separate) will hold their annual reunion in Anaheim, California, 10-14 July 1996.

The brigade was the first U.S. Army ground combat unit to serve in the Republic of Vietnam in May 1965 and the only U.S. Army unit to conduct a combat parachute jump in Vietnam. The brigade's 4th Battalion, 503d Infantry, was also the first U.S. Army ground combat unit to fight in the I Corps area of Vietnam when it went in to assist the U.S. Marine Corps in the Da Nang area in the fall of 1966.

For additional information on the 1996 reunion, please write to Reunion Headquarters, P.O. Box 5482, El Monte, CA 91784, or contact Mr. Ramiro Lopez at (818) 969-4321.

RAYMOND C. RAMIREZ
Chairman, Southern California
Chapter XIV



INFANTRY NEWS



THE INFANTRY CENTER realizes that there are sighting problems such as induced parallax and difficulty acquiring symbology with the M42 combat vehicle chemical-biological protective mask, and that there is also a need for fire retardant chemical protective clothing.

The mask problems stem from lenses that are rigid against the main gun sight, preventing a track commander or gunner from getting his eye close enough to the sight.

There are immediate solutions to some of the M42 mask problems. The U.S. Army Armor School published and distributed some "workarounds" to be used by Abrams tank and Bradley fighting vehicle crewmen. Track commanders and gunners have been advised to experiment to see which techniques are necessary:

Removing the eyelens outserts from the mask. The outserts are designed to protect the lenses on the faceblank from scratches that would shorten the life of the mask. Removing them allows a crew member to get his eye closer to the optic, and most optics have rubber guards that protect against scratching.

Removing the brow pad. For most crewmen, the lens of the M42 will press against the brow pad of the GPS and GPSE, holding his head back from the optics. This pad can be removed if doing so provides a greater field of view. In the conduct of fire trainer (COFT), the gunner's brow pad can be moved back against the sight farther than in the tank and may not need to be removed. *Bending* the brow pad instead of removing it is not recommended.

Turning the head slightly to the side to look through the sight. A crew member may be able to get his eye closer to the optic by turning his head to the side and, when he is ready to engage a target and lay the main gun, press his head into the sight to get his eye closer so he can

get a better image and read the symbols. He should relax this pressure whenever possible.

Although most of the problems with the new mask can be solved with quality training, a new mask, the XM45, is being developed to improve sighting. It will be tested further to determine whether it meets the needs of the different services. Other masks that have already been developed may be considered if they also fit closer to the eyes.

In addition, flame protection is being incorporated into many of the future chemical-biological protective clothing systems. Testing of these suits is already under way, and the Infantry Center is looking for the right candidates for the various infantry units.

The point of contact at Fort Benning is 1LT Sailors, Clothing and Individual Equipment Division, Directorate of Combat Developments, DSN 835-6400, commercial (706) 545-6400, or E-mail: SAILORSM@BENNING-EMH2.ARMY.MIL.

THE U.S. ARMY Soldier Support Command has the following items in various stages of development at its Natick Research, Development, and Engineering Center (NRDEC):

Body Armor Set, Individual Countermine (BASIC). BASIC consists of ballistic eye protection, antifrAGMENTATION protective trousers, and antipersonnel mine protective overboots. It is used with the PASGT (personnel armor system for ground troops) vest and helmet to protect soldiers against small, low-velocity fragments from antipersonnel mines and booby traps.

BASIC was type classified, limited procurement urgent, in 1994 to protect combat engineers and others performing mine-clearing operations, and sets have been sent to units in Bosnia.

New Family of Space Heaters. Three nonpowered heaters that form the nucleus of the family have different heat outputs but share certain design features. One of these features is a burner technology that vaporizes the fuel in a special tube and then mixes it with air to allow combustion to take place. Another feature is a multi-fuel valve that controls fuel flow. Compact thermoelectric fans can also be set on the heaters to distribute heat more uniformly in a tent. The fourth member of the family is a special convective space heater that can be used either inside or outside a tent.

These new heaters will be safer and more responsive and will require less maintenance than current heaters.

Mountain Bicycles. A preliminary evaluation of two mountain bikes for their military application was conducted in October 1995. It is envisioned that, in the future, mountain bikes will be used for a variety of military operations including patrolling, reconnaissance, peace-keeping missions, and rear-area transportation.

Insulated Food Container (IFC). The IFC is the result of initiatives to improve the performance of Army Field Feed System-Future equipment. Under the Soldier Enhancement Program, NRDEC conducted a project to determine the availability of commercial products that could replace the old "Mermite" container. The Mermite has been used for more than 40 years to transport hot and cold foods from field kitchens to soldiers at remote sites. The new container has also been adapted for delivering meals to patients on the wards in Army field hospitals.

ERGO Drink. The ERGO (energy rich, glucose optimized) drink is intended to increase soldier endurance by stretching out the delivery of glucose to the bloodstream, thereby conserving the glycogen stored in the liver and muscles.

BRADLEY CORNER

THE BRADLEY Proponency Office (BPO), 1st Battalion, 29th Infantry, at Fort Benning, recently completed work on a revision of Field Manual (FM) 23-1, *Bradley Gunnery*, which has a publication date of 15 March 1996.

This revision reflects several significant changes based on intensive input from the field. The manual supports recent and upcoming events that will affect the Bradley community—the fielding of the M2A2/M3A2 Operation DESERT STORM (ODS) vehicles, the through-sight video (TSV), the precision gunnery system (PGS), and Bradley-equipped air defense artillery (ADA) units. The new manual also updates and incorporates information previously found in Training Circular (TC) 23-5, *Bradley Training Devices*.

The manual is designed in two parts: Part I, the Crew Member's Handbook, contains information specific to the vehicle, the weapons, and the crew members. Part II, the Training Manager's Handbook, contains information training managers and master gunners need to plan, prepare, and execute Bradley gunnery training.

The new manual is smaller (the size of FM 7-7J) and is hole-punched to fit in the green TM binder or the small black binder. This enables soldiers to build their own manuals on the basis of their particular missions (evaluation, skill testing, range setup, air defense artillery, or cavalry gunnery) and to keep them in the vehicles and at training sites instead of

on office book shelves.

The training objectives traditionally found under the heading of Basic Gunnery have been moved to Preliminary Gunnery, and Device Gunnery has taken the Basic Gunnery position in the training strategy. Device Gunnery will train crews, squads/sections, and platoons in device-based environments. The integration of the mounted and dismounted elements at this point in the training strategy provides an important training piece that is not in the previous manual. It is at this stage that crew and battle-drill training is emphasized.

The manual identifies challenging crew gunnery tasks. The gunnery tables ensure that these tasks are trained and evaluated with minimum redundancy between engagements. The result is an increase in the number of multiple, commander, and coaxial machinegun engagements. Manual engagements are also introduced. The threat-based crew gunnery exercises and qualification are evaluated using a T-P-U (trained-needs practice-untrained) system. Standards are developed for engagement tasks and critical, leader, and non-critical subtasks. This allows a more detailed evaluation of crew warfighting skills and provides an evaluation system that is applicable to all present and future Bradley variants. The T-P-U system supports the goal of shifting the gunnery focus from crew gunnery to infantry platoon, cavalry, and ADA section gunnery.

The manual also introduces a change

in exercise development that will allow for more battle-focused training. It maintains a threat-based standard while giving division commands the latitude to tailor engagements on the basis of their contingency missions, mission essential task lists, and command emphasis. Division commands determine specific target types and engagement distances on the basis of threat and terrain analysis. FM 23-1 identifies engagement task conditions and establishes the threat-based kill standards.

Platoon gunnery easily supports mission training plan evaluations. Evaluators will use "penalty matrices" that are based on target, vehicle, and personnel posture during the engagement. While the current method attempts to provide gunnery tasks and standards for every possible situation, these penalties will assess realistic vehicle and personnel shortcomings. The senior evaluators may assess additional penalties based on their observations.

Appendix D contains a sample dismounted training program that begins with individual training and progresses through squad/platoon situational training exercises (STXs) and culminates in a live-fire dismount platoon qualification.

To obtain more information on FM 23-1 or any other Bradley-related subject, units may write to Commander, 1st Battalion, 29th Infantry, ATTN: ATSH-INA-BPO, Fort Benning, GA 31905; or call DSN 784-6201/6563, commercial (706) 544-6201/6563.

The drink is formulated with 12 percent carbohydrates in a mix of maltodextrine, glucose, and fructose (or other sweetener). It serves as a beverage source of supplemental carbohydrates and promotes rapid recovery from fatigue.

The new drink is under evaluation and is expected to be available to soldiers by 1997.

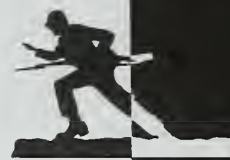
Self-Heating Group Ration (SHGR). This is a complete, self-contained, self-

heating ration for use in group feeding situations. A complete meal for 18 soldiers, it is set into four institutional pouches, containing the entree, a starch, a vegetable, and a dessert in a fiberboard box. With the addition of two quarts of water, the heating elements heat the entire meal in 30 minutes.

This ration is ideal for feeding soldiers in remote areas where bringing in fresh food is difficult. It is also perfect for use in situations where tactical consider-

ations preclude the use of field feeding equipment.

Self-Heating Individual Meal (SHIM). This individual version of the group ration allows a soldier to heat a packaged meal on the move. It consists of entree, chemical heater, and activating solution all in one package. A soldier simply pulls the tab to activate the heating element, and the meal is hot in 12 to 15 minutes.



Soldiers With P3 Profiles Fit or Unfit—Who Decides?

MAJOR STEPHEN G. DUCKWORTH

As a commander, you have a soldier who just returned from the hospital with a permanent "3" profile in one of the areas in the PULHES physical profile serial code. Is that soldier fit or unfit, deployable or nondeployable? Who makes the call, and how much say do you have in the decision? (*PULHES stands for Physical capacity, Upper extremities, Lower extremities, Hearing, Eyes, Psychiatric.*)

As with virtually everything else in your command, your input will weigh heavily in the answers to these questions and in the outcome. But you need to know where to get the guidance that will make your input most effective.

First, you should know a little about the process and what a "permanent 3," or P3, profile means. According to Army Regulation (AR) 40-501, *Standards of Military Fitness*, chapter 7-3, a profile containing one or more "3" numerical designators signifies that the individual has one or more medical conditions or physical defects that require certain assignment restrictions. The soldier should receive assignments commensurate with his or her physical capability for military duty.

Additionally, because a doctor has issued your soldier a P3 profile, you must (in accordance with AR 600-6, chapter

2-1) refer him to an MOS/Medical Retention Board (MMRB). Thus, the process begins.

In some cases, you may want to stop everything at this point. If you consider him a good soldier and believe the profile is too restrictive, pick up the phone and call the doctor. See if you, the doctor, and the soldier can reach an agreement that the profile is higher than necessary. If the profile is changed to a P2,

***A soldier with a P3 profile
must be referred for evaluation
to an MOS/Medical
Retention Board.***

no MMRB is required. You keep the soldier and the process stops.

On the other hand, if a soldier has received a P3 profile and has not been performing to standard because of the physical disability, decide in your own mind whether the soldier could still perform the duties of his or her rank or grade in another MOS. For the MMRB, you must prepare an evaluation of the soldier's physical capability and the effect the limitations of the permanent profile would have on his MOS or specialty duties. This evaluation will carry considerable weight with the MMRB and with

any future board the soldier might encounter.

In this evaluation, do not talk about the great things the soldier has done in the past. Tell it like it is! If the soldier has no potential for future service, in your opinion, then say it. If you water down the evaluation or talk about how well he has performed in spite of his limitations, you can expect to keep that soldier.

Your evaluation will affect which of the four possible courses of action the MMRB recommends:

- Retain the soldier in PMOS or specialty.
- Recommend reclassification of the soldier.
- Place the soldier on a probationary status (not to exceed six months).
- Refer the soldier to the Army's Physical Disability System.

If the board recommends reclassification, this does not necessarily mean the Total Army Personnel Command (PERSCOM) has an open MOS (one the soldier is qualified to enter) in which to reclassify him. PERSCOM may disapprove the reclassification. Your Personnel Activity Center (PAC) can help both the soldier and PERSCOM by listing the shortage MOSs he is qualified to enter and requesting that he be placed in one of them.

If the MMRB refers the soldier to the Army's Physical Disability System, the next step is a Medical Evaluation Board (MEB). Although the MEB is composed solely of doctors, your input is important in the way they view the soldier's condition and whether he is deemed medically acceptable or unacceptable for military service. (Don't expect the doctor to call you for input; call the doctor, and tell him or her what the soldier realistically can or cannot do.) If the MEB finds the soldier medically unacceptable and forwards the case to a Physical Evaluation Board (PEB), your evaluation will again carry considerable weight in that board's determination as to the soldier's fitness.

AR 635-40, *Physical Evaluation for Retention, Retirement or Separation*, explains the policies and procedures the PEBs follow. Chapter 2-9 directs unit commanders to become thoroughly familiar with the purpose of the Army Physical Disability Evaluation System.

I know what you're thinking, and until a few months ago, I didn't know anything about the system either. Here are some tips that will ease your profile-related stress and speed up the disability evaluation process:

- Make sure medical personnel do not give your soldier the profile form (DA Form 3349). Look at the "Distribution" block on the form; you get the original and one copy, so *you* give the soldier a copy of the profile, not the doctor. Note the block that says "Action By Unit Com-

mander." If you want a board to find a soldier unfit, fill this block out and make it part of the MEB record.

Additionally, if the doctor has given the profile directly to the soldier, there's a good chance the rest of the distribution has not been made properly either. Your military personnel office (MILPO) is supposed to get a copy so the proper SIDPERS database entries can be made. Chances are that if you receive a soldier with limitations so severe that he or she

A P3 profile, by itself, does not mean a soldier is nondeployable. Soldiers deploy with P3 profiles all the time.

never should have been assigned to you, it is because PERSCOM never received a copy of the soldier's assignment limitations.

- Call the medical personnel who write the profiles. In most cases they consider your input valuable but are too swamped to track you down. And if they don't hear from you, the soldier is their only source of information.

- A P3 profile, by itself, does not mean nondeployable. (Check AR 600-60, chapter 2-4.) Soldiers deploy with P3 profiles all the time. If your first sergeant's only medical problem is that

he wears a hearing aid (H3), are you going to tell him he's not deployable?

- It is outside the physician's responsibility to state "No field duty," "Nondeployable" or "No PT." If a soldier cannot take any form of PT test, he should have a P4 profile instead of a P3. Call the doctor; it makes a difference.

The U.S. Army Physical Disability Agency recently completed initial staffing on an action that may lead to the suspension of MMRBs for one year as a test. During this period, soldiers who failed to meet medical retention standards would be sent directly to PEBs. Soldiers seeking MOS reclassification for medical reasons would apply to PERSCOM as any other soldiers would do. In the absence of the MMRB, the commander and the physician would determine whether or not the soldier entered the disability system. If approved, the test will begin in the third or fourth quarter of Fiscal Year 1996.

If I can assist you in understanding the P3 system, call me at DSN 295-7326/7328, or commercial (301) 295-7326. Or write to: Commander, U.S. Army Physical Disability Agency, ATTN: Plans and Policy, Forest Glen Section-WRAMC, Washington, DC 20307-5001.

Major Stephen G. Duckworth, an infantry officer, is now serving as plans and policy officer, U.S. Army Physical Disability Agency. He previously served in the 10th Mountain Division, the United States Army South, and the 82d Airborne Division. He is a 1981 ROTC graduate of the University of South Alabama.

Managing Stress

In Cold Climates

MAJOR PATRICK J. SWEENEY

The intense stress of operating in cold weather can seriously threaten a unit's ability and will to fight. Stress reduces

the soldiers' capacity for thinking clearly, causes them to tire more quickly, and makes them more susceptible to injury

and illness. Leaders can learn to control this stress, however, and use it to their advantage.

For example, in the winter of 1939-1940, Finnish light infantry leaders used their ability to fight in the extreme cold to help demoralize and destroy the Soviet 44th Motorized Rifle Division, which held superiority in both numbers and firepower. Finnish commanders had developed the skills to cope with the cold and the equipment to support cold-weather operations. By comparison, the Soviet soldiers lacked the training and equipment to operate in such extreme cold temperatures, and this reduced their ability to fight and diminished their will to resist. This historical example highlights the importance of managing the stress of extreme cold weather.

Stress is the body's response to any unusual demands upon it. When confronted with a situation in which the perceived challenges or threats are equal to or greater than the perceived ability to meet them, the body responds physically and mentally to meet the demands.

The physical response is an automatic process initially characterized by an increase in heart rate and breathing, along with sweating and "butterflies in the stomach." If a person remains in the stress-inducing situation, his heart rate and breathing return to normal after a few minutes, but the body maintains the state of alertness through elevated hormone levels.

Prolonged physical stress on the body, caused by exposure to a continuing stress agent, increases susceptibility to fatigue and disease because the body must use its energy reserves to maintain the heightened alertness. This expended energy—coupled with that required to meet the physical demands of moving over or through the snow, keeping the body warm, and conducting continuous operations—can quickly deplete energy reserves.

Similarly, prolonged physical tension suppresses the body's immune system, thus increasing susceptibility to disease. Researchers do not fully understand why this is true, but a plausible explanation is that the hormones needed to sustain the body's physical alertness hinder the reproduction of cells that fight infection. During World War II, because of the stress of serving on the isolated, wind-and-

storm-swept Aleutian Islands, many flight crewmen fell victim to lingering head colds, anemia, ear infections, psychosomatic pain, and psychological withdrawal. Fatigue and illness can quickly erode the physical ability and the mental resolve soldiers need to accomplish the mission.

The mental component of stress involves heightened states of mental activity. Although this increased activity enables a person to make quick decisions, too much may eventually impair clear thinking and the ability and the will to perform mission tasks.

A leader can manage the mental stress associated with operating in cold environments by building his soldiers' confidence that they can handle the challenges, and by providing them with accurate information on what is required of them. The

Prolonged physical stress on the body, caused by exposure to a continuous stress agent such as cold weather, increases susceptibility to fatigue and disease.

best way for a leader to boost his soldiers' confidence is to conduct individual training in the use of specialized cold-weather clothing and equipment and unit training on mission essential tasks in cold weather.

Managing the stress caused by cold weather includes preventive measures before deployment and active measures during deployment.

Before Deployment

Soldiers' confidence in their ability to operate in cold weather is best influenced by good training and leadership before deploying to a cold weather region.

Training. Training must focus on teaching soldiers how to use and maintain the special equipment they will need to survive and operate in cold environments—squad stoves, tents, ahkios, cold weather clothing, snowshoes, and skis. Mastering these survival skills helps build the soldiers' confidence because it gives them some control over their environment. And once they have this control, their self-confidence further increases, thus reducing stress.

Training on the basic survival skills can be conducted in a classroom or motor pool. Once soldiers master these skills, they should be required to perform the same tasks in actual cold weather, depending upon their geographical location. If conditions permit, the soldiers might wear their cold weather clothing during battle drills and critical platoon tasks. This will give them a feel for the ways in which the usual procedures need to be modified in cold weather. If a unit's location prohibits the practice, access to large walk-in freezers at a cold-storage facility or a packing house might allow soldiers to test their cold weather clothing.

Leaders should also plan for additional time after the unit arrives in the theater of operation for the soldiers to acclimatize and practice battle drills and platoon collective tasks.

Physical Conditioning. Good physical conditioning reduces stress by boosting the soldiers' confidence in themselves and their ability to handle the tasks they will face. In addition, it helps soldiers prepare their bodies for the rigors of cold weather operations by reducing their susceptibility to fatigue.

Before deploying, leaders should design a physical training program that builds aerobic endurance and increases leg strength so the soldiers will be better able to move on snowshoes or skis.

Sharing Information. Leaders should give soldiers accurate information to help them form realistic expectations of what they will have to do to perform their mission. Since many soldiers have had no experience with extreme cold (-20 degrees Fahrenheit and below), they often have exaggerated ideas of what it takes to operate in cold weather, and this increases the likelihood of stress.

Among the good sources of information on cold weather operations are soldiers who have had experience in cold weather environments; doctrinal manuals such as Field Manual (FM) 31-70, *Basic Cold Weather Manual*, and FM 31-71, *Northern Operations*; and professional publications such as Leavenworth Papers No. 5, *Fighting the Russians in Winter: Three Case Studies* and *The Thousand Mile War*.

Cohesion. Leaders should follow the guidelines in FM 22-102, *Soldier Team Development*, to build cohesion in the unit. Cohesion helps fight stress by providing a social support system in which individual soldiers can talk about their fears and learn coping strategies. And knowing that other members of the unit will provide any help he may need boosts a soldier's confidence in his own ability to meet the demands of operating in cold weather.

A buddy-team strategy in each squad assures soldiers that someone besides the chain-of-command is looking out for them. In addition, a soldier's knowledge that his peers are relying on him, coupled with a fear of letting them down, can give him an incentive for successfully managing the stress of cold weather. A soldier's consideration for his squad or platoon mates—and concern about their perception of his courage—give him the motivation to face great dangers.

Trust. Developing trust in the unit's leaders will help counter the stress associated with cold weather. Soldiers who believe their leaders care about them and are competent are likely to think more highly of their own abilities.

Leaders need to know when to modify techniques, tactics, and procedures (TTPs) to protect their soldiers' welfare while operating in extreme cold weather. For instance, the severe winter of 1941-1942 was one of the major reasons the Germans changed from an elastic defense to the doctrine of a village-based strongpoint. Villages offered immediate shelter from the elements, which solved many of the potential health problems associated with operating in the cold. Warm shelters reduced the chance of disease because the soldiers could heat food, thaw drinking water, and perform personal hygiene. Also, warm shelters reduced the medical complications caused by exposure, thus increasing the rate of survival for wounded soldiers.

Leaders must keep their plans simple and allow extra time for assigned tasks. For instance, leaders must give soldiers extra time to march order their equipment because of the reduced manual dexterity of the soldiers, the stiffness of cold equipment (communication cables and canvas),

the need to adjust clothing, and the increased amount of equipment that must be packed. Likewise, leaders need to plan on 50 to 75 percent more time for foot movements because of the need to break trail, the increased soldier load, the slower rate of movement over snow and ice, and the need to establish heated shelters as soon as the march ends. In fact, extra time is needed to perform most individual and collective tasks in extreme cold weather; unrealistic expectations with regard to time constraints only compound the stress. In addition, leaders should modify operating procedures by assigning a higher priority to providing warmth and shelter. For example, the priority of work for an advance party must include setting up a heat source immediately after securing the new position.

Some other examples of modifications to TTPs are: setting up warming tents for

To manage the stress caused by cold weather, a leader must take preventive measures before deployment and active measures during deployment.

perimeter guards; ensuring that vehicles travel in groups and that at least one vehicle has a radio; allowing crews to warm up between missions; and ensuring that soldiers have their survival packs when they leave the unit.

Maintenance. Before deployment, leaders need to ensure that vehicle batteries are fully charged and that operators are familiar with the procedures for operating their equipment in cold weather as well as applying Arctic-grade lubricants, if specified by the operator's manual. These preventive maintenance measures help reduce stress by increasing the soldiers' confidence in their equipment; this, in turn, increases their perception of being able to handle the demands of operating in a cold environment. These preventive measures also help reduce the potential for maintenance problems, which will increase the stress.

Military leaders in both World Wars learned that special lubricants had to be used on equipment in extreme cold, and this is still true. If lubricants do not main-

tain their viscosity at extremely low temperatures, the moving mechanisms on weapons and vehicles will freeze solid and severely hamper a unit's ability and will to fight. (Further information on preparing equipment for cold weather is found in FM 9-207, *Operation and Maintenance of Ordnance Materiel in Cold Weather*.)

During Operations

The "Follow Me" concept is one of the most useful tools a leader has for combating stress in his unit during cold weather operations. Most soldiers—unsure how to act or feel when confronted with such an unfamiliar and threatening situation—look to their leaders for cues on appropriate behavior or emotions.

Leadership. During cold weather operations, leaders should acknowledge the dangers the climate presents. At the same time, however, they should try to demonstrate productive coping behavior by performing as if the cold weather does not bother them. Soldiers who see their leaders coping with the stress of cold climates are more likely to behave in a similar manner. Leaders must be out in the cold, guiding, directing, and encouraging soldiers to accomplish the mission.

At the same time, leaders must also take care of their own needs. If a leader begins to feel overwhelmed by the stress of operating in cold weather, he should seek out trusted peers and talk about his concerns. This sharing may help him realize that his own concerns have been exaggerated and help clarify his perception of leading in cold weather. Through these discussions, all leaders may learn more efficient ways to stay warm during cold weather operations, which will increase their confidence that they can successfully cope with the demands of the situation.

Basic Soldier Health. The chain of command, especially squad leaders, must be attentive to the soldiers' welfare. Physical health has a significant effect on confidence and motivation. In extreme cold weather, soldiers often fail to drink enough fluids because the water in their canteens is cold or frozen, and they have a similar aversion to eating cold or frozen combat meals, to sleeping, and to



The stress of cold-weather operations—particularly when combined with factors such as NBC conditions—can limit the effectiveness of the combined arms team.

performing basic hygiene.

Leaders must check to ensure that their soldiers are drinking enough fluids, eating properly, relieving themselves regularly, maintaining good hygiene, and sleeping at least four to five hours a day.

Because of the danger of dehydration, leaders must take steps to overcome the soldiers' reluctance to drink. Each squad leader should make sure his soldiers put their canteens in their sleeping bags (or between their sleeping bags and foam mats) at night and that they fill them with hot water each morning to prevent freezing during the day. In addition, leaders should provide hot liquids whenever possible—tea, chocolate, or soup. Leaders also need to train soldiers to check their urine for signs of dehydration; heavy yellow or amber urine indicates too little fluid. Squad leaders should periodically check the squad urination point for heavy yellow or amber spots.

Regular, balanced meals ensure that soldiers have the energy to meet the demands of operating in a cold environment. Leaders can encourage soldiers to eat balanced meals by providing stoves to heat MREs (meals, ready to eat) as well as a warm place in which to eat them. When meals cannot be heated, the soldiers can place the MRE packets inside their shirts to be warmed by body heat.

Leaders can encourage soldiers to eat T-rations by serving the food in a warm tent with an adjacent heated tent in which they can eat. Soldiers may feel it is not worth the effort to get fully dressed to go and get hot food that may be frozen by the time they carry it back to a squad tent.

Elimination is a particularly difficult problem. Extreme cold, understandably, causes some soldiers to postpone defecation until the last possible minute, and this practice can cause painful intestinal problems.

Defecating in extreme cold must be a well-rehearsed process that reduces exposure to an absolute minimum. Leaders should teach soldiers these procedures and encourage them to practice in the privacy of their rooms before deployment to a cold environment. Learning these procedures will encourage soldiers to defecate on a regular basis, thus preventing intestinal problems that could compound the stress.

Although leaders can provide a heated tent latrine, this alternative has several disadvantages:

First, during a high-tempo operation it is not feasible to set up a tent and stove for a latrine. And soldiers who have come to depend on this heated environment may decide to wait until the tent latrine is set up. Using the squad tent for this purpose must be discouraged for sanitary reasons.

Second, from the organization's perspective, a tent latrine wastes man-hours

because it usually has to be heated for each individual visitor. Safety concerns and regulations prohibit a lighted stove from being left unattended, and in extreme cold it takes a Yukon stove seven to ten minutes to heat the tent to a comfortable level. Thus, for each trip to the latrine, a soldier wastes ten minutes waiting for the tent to heat. Finally, using a tent for a latrine limits its use for other purposes because of the relatively permanent odor.

Cold Weather Clothing. Leaders must ensure that soldiers do not overdress, because the sweating that results can itself cause either cold or heat injuries. Squad leaders must teach soldiers not to wear cotton underwear under the polypropylene long underwear; cotton absorbs sweat and keeps it close to the body, thus increasing the risk of cold weather injury. If the soldiers are going to perform strenuous physical activity such as cross-country skiing, leaders need to ensure that they dress in layers with minimal clothing (polypropylene underwear, olive drab wool shirt, and parka shell). Leaders need to make sure soldiers wear the cold weather clothing properly and change into clean clothes whenever possible.

Soldiers must wear gloves or glove inserts when handling metal objects or petroleum products. Touching cold metal with exposed skin can cause contact frostbite. Handling petroleum products in extreme cold presents an even greater hazard. These products, especially fuels, become super-cooled and can cause deep frostbite on contact with exposed skin. Support personnel should have extra gloves or mittens to use exclusively when handling petroleum products.

Foot Care. Soldiers must change their socks and dry and powder their feet roughly every four hours or after strenuous activities, to keep their feet warmer and prevent such injuries as trench-foot or frostbite. Soldiers can dry their socks on the move by placing them inside their shirts. As with cotton underwear, cotton socks should not be worn under other socks. If a heated squad tent is available, socks can be hung on the utility cords strung inside the Arctic tent liners.

During sleep periods, soldiers should

place their vapor barrier (VB) boots either under or inside their sleeping bags. The most comfortable position for the boots is under the legs. If a stove will be on during the sleep period, soldiers can hang their boots from the center pole to dry them out and keep them warm. Warm VB boots are more pleasant to put on, and they help ensure that the feet stay warm for longer periods of time.

Hygiene. Soldiers' concern for personal hygiene tends to drop with the temperature. It is often difficult to get a warm bucket of water and a warm place to wash their bodies and brush their teeth. Soldiers should be encouraged to bring commercial wipes or alcohol pads to the field for personal hygiene (face, feet, genitals). They can carry these inside their shirts so that, when they get a chance to clean their bodies, the wipes will be warm.

Leaders need to know when to modify techniques, tactics, and procedures to protect their soldiers' welfare while operating in extreme cold weather.

Squad leaders also need to make brushing teeth a priority before soldiers sleep. Good oral hygiene not only prevents mouth disease but also promotes social tranquility in the section tent.

Leaders should encourage their soldiers to get battery-operated razors for shaving, because hot water is not always available. Soldiers can put these razors in their sleeping bags at night to warm up the batteries and then shave before leaving the bags in the morning. This process saves time because soldiers do not have to wait for a bucket of water to warm up. Also, during high-tempo exercises, soldiers can put the razors in their pockets and shave before moving or during a pause in action.

Sleeping. Because of the lack of confidence in their sleeping bags, some soldiers volunteer for fire guard so they can stay by the stove during their sleeping period. A leader faced with this situation can position the soldiers close to the stove and give them tips on how to stay extra warm in a sleeping bag—wrapping up in

a poncho liner, stripping to polypropylene underwear, wearing down booties and a polypropylene balaclava (ski-mask), and stuffing the bottom of the bag with pants and shirt.

Adequate sleep helps maintain a soldier's physical and mental stamina. Fatigue tends to increase the tendency for both leaders and soldiers to overestimate the demands of a task and underestimate their ability to handle it, thus increasing stress. Sleep deprivation affects the soldiers' mental functioning and motivation, which degrades the unit's ability and will to fight.

Face Camouflage. Because of the risk of frostbite, the olive drab or white balaclava replaces face paint as part of a soldier's personal camouflage.

All of these preventive measures help fight stress by sustaining the soldiers' confidence in their ability to operate successfully in the cold.

The stress caused by cold weather, if not managed, can be as much a threat to a unit's will and ability to fight as action with the enemy. The management of stress is therefore a critical leadership task in cold weather operations.

Leaders can successfully accomplish this in their units by ensuring that the soldiers' ideas of what it will take to successfully operate in the cold do not exceed their perceived capabilities.

Leaders can help take the stress out of cold weather operations by taking preventive measures to boost the soldiers' confidence in their abilities and by providing them with information that will help them assess what is involved. As the Finnish light infantry proved when they defeated the Soviet 44th Motorized Rifle Division in World War II, the successful management of the stress induced by cold weather is indeed a combat multiplier.

Major Patrick J. Sweeney has served with the 6th Infantry Division in Alaska and with the 3d Infantry Division in Germany. He is now an assistant professor in the Department of Behavioral Science and Leadership at the United States Military Academy. He is a 1982 graduate of Academy and holds an advanced degree from the University of North Carolina at Chapel Hill.

Cold-Weather Risk Management

A Common Sense Approach

CAPTAIN JONATHAN D. THOMPSON
TOM SKALA

Training in cold weather is inherently dangerous, and leaders continually face the challenge of finding ways to prevent cold-weather injuries. As roads become slippery from snow and ice, drivers have a harder time maintaining control of their vehicles. And warming tents can quickly burn to the ground if soldiers do not use the stoves properly. Despite these and other hazards, cold-weather training is a fact of life in such regions as Alaska and Germany. Leaders at all levels must assess the risks and then manage them so that training will be as safe as possible without sacrificing realism.

Assessing the Risk

Leaders must first determine the risks associated with their training plan. In doing this, they are normally guided by the standard risk-assessment card, which should be familiar to every leader. When a unit conducts training, leaders fill out the card to determine the risk category for their training. After determining the risk value of the seven categories, they arrive at a numerical value that tells them whether the training is *Low Risk*, *Caution*, or *High Risk*. This assessment helps them determine measures needed to reduce the dangers.

The current card, however, is inadequate for cold-weather operations. It is too general and can be misleading. For example, under the *Weather* category, it lumps together all temperatures below 31 degrees Fahrenheit. In Alaska, training is clearly more hazardous at -10 degrees than at +30 degrees. Because the card shows the same risk values for both con-

ditions, an inexperienced leader may take fewer precautions than he should, or be overly cautious when he doesn't need to be.

At the Northern Warfare Training Center at Fort Greely, Alaska, where we normally conduct winter training in temperatures at or below -20, we have developed a modified risk assessment worksheet that is better suited to cold-weather operations (Figure 1).

First, we modified the *Soldier Selection* category to show the amount of cold-

The current risk assessment card is too general for cold-weather operations and may mislead leaders.

weather training and exposure a soldier or a unit has had. Soldiers with no cold-weather training usually do not have the knowledge or skills to train safely or effectively and therefore fall into the highest risk category. As they operate more in cold weather, they acclimatize and learn how to survive and fight in the cold, and this experience makes subsequent training safer. Clearly, soldiers and units that are cold-weather veterans are the safest because they know what to expect.

Next, we changed the *Weather* category in two ways. We subdivided the temperature conditions into more definite temperature zones. This lets leaders know that all training conducted at temperatures below freezing is not the same. Obviously, soldiers are more likely to become

cold-weather casualties when the temperature is -20 degrees than when it is +20.

Then we moved the visibility categories from the top of the box to a specific condition under the temperature ranges. We then assigned risk values to the amount of exposure. Understandably, as soldiers remain in extreme cold temperatures for longer periods, the probability of cold-weather injuries increases.

We also increased the risk value under specific conditions. On the current card, the highest risk value in any category is 5. On the modified card under *Weather* we increased the highest value to 9 for some conditions (long operations during a blizzard, for example), thereby identifying this training as extremely hazardous.

Finally, we changed the last category from *Sustainability* to *Rest and Maintenance*, because training is more dangerous when soldiers get little rest and have less-than-adequate equipment.

The final change was in the overall categories of training. Under the standard card, training is rated in three risk categories—*Low risk*, *Caution*, and *High risk*. We added an *Extreme* category, and now consider training to be in that category if it receives a value of 36 or higher, or if one area receives a 7 or higher. We recommend that a commander at brigade or higher be the approving authority for any training in this category.

Managing the Risk

Although the modified risk assessment card better meets our requirements in

Alaska and other cold regions, this alone still does not make training safer. Steps must be taken to keep the dangers to a minimum. For this, we have developed planning considerations for cold-weather training and operations for each of the five temperature zones. The purpose is to provide guidelines and key points for leaders to remember while planning training or missions.

As shown on the sample in Figure 2, we have provided recommendations for the same six areas—clothing and personal equipment, training, food and water, shelter and heat, additional support requirements, and task or mission limitations—for each temperature zone on our risk assessment card:

Temperature Zone I (55 to 33 degrees). Normally, weather does not affect training in these conditions as much as it does at lower temperatures. Leaders should concern themselves primarily with preventing such nonfreezing cold-weather injuries as hypothermia and trenchfoot. The soldiers' normal TA-50 and initial issue clothing protects them so long as they wear it properly. Footwear can be the issue combat boots or the new intermediate cold-weather boots. Soldiers can survive on three MREs per day without additional supplements.

Temperature Zone II (32 to 10 degrees). As the temperatures drop below freezing, leaders must start to be concerned about freezing injuries, in addition to the nonfreezing injuries in Zone I. Frostbite is the most likely freezing injury that soldiers will suffer. Soldiers must know how to prevent, identify, and treat these injuries. They must know how to wear clothing properly, and leaders must start checking them more often. Footwear should include some type of insulated boots that are also waterproof.

Soldiers need more calories to stay warm while operating in the cold. They should receive food supplements to the standard ration cycle or receive cold-weather rations that will provide 4,500 calories per day. If at all possible, they should get hot food twice a day.

Soldiers need better shelters than a poncho hooch or pup tent, and the 10-man arctic tent and Yukon stove provide this shelter. Soldiers must know how to set

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS									
Planning					Weather				
CIRCLE ONE		Risk Value			CIRCLE ONE		Risk Value		
		SCORE					SCORE		
		Preparatory Time					Exposure Duration		
		Optimum	Adequate	Minimal			<8 hrs	8 - 24 hrs	24 - 72 hrs
Guidance					Temperature (F)				
FRAGO		3	4	5	(Spec. Conditions)				
OPORO		2	3	4	55 to 33	1	1	2	3
OPLAN/LOI		1	2	3	32 to 10	2	2	3	4
					9 to -19	3	4	4	5
					-20 to -40	5	6	7	8
					Below -40	6	7	8	9
					(blizzard, ice fog, snowstorm, whiteout)	6	7	8	9
Mission Control					Terrain				
CIRCLE ONE		Risk Value			CIRCLE ONE		Risk Value		
		SCORE					SCORE		
		Training Event					Traficability		
		Support	Day	Night			Improved	Secondary	Trail / Cross Country
Task Organization					Type Terrain				
OPCON		3	4	5	*Mountain	3	4	5	
Attached		2	3	4	Hills	2	3	4	
Organic		1	2	3	Flat / Rolling	1	2	3	
Soldier Endurance					Rest and Maintenance				
CIRCLE ONE		Risk Value			CIRCLE ONE		Risk Value		
		SCORE					SCORE		
		Soldier Preparation					Equipment Status		
		Optimum	Adequate	Minimal			Optimum	Adequate	Minimal
Environmental Preparation					Personnel Rest				
Nonacclimated		3	4	5	<4 hrs. (in 24 hrs.)	3	4	5	
Part. Acclimated		2	3	4	6 hrs. (in 24 hrs.)	2	3	4	
Acclimated		1	2	3	>8 hrs. (in 24 hrs.)	1	2	3	
Soldier Selection					Numeric Value				
CIRCLE ONE		Risk Value			CIRCLE ONE		Risk Value		
		SCORE					SCORE		
		Soldier Experience					Equipment Status		
		Extensive CW Exposure	CW 1 / No CW Exposure	MOS Qualified			Optimum	Adequate	Minimal
Task									
Complex		3	4	5			1, 2	3, 4	5, 6
Routine		2	3	4			Low Risk	Medium	**High Risk
Simple		1	2	3			7 to 12	13 to 23	24 to 35
									***Extreme
									36 to 40
					Cumulative Score				

* Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.
 ** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.
 *** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.

Figure 1

PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS	
TEMPERATURE ZONE II 32 to 10 (F)	
AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	standard cold-wet uniform, wet-weather parka & pants or ECWCS intermediate cold weather boot (ICW) with rubber overboot or black (VB) boot ligh & heavy socks (2 sock system), lightweight poly long underwear insulated gloves, trigger-finger mittens lightweight sleeping bag w/ poncho liner over-white camouflage
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) freezing cold weather injuries (frostbite) clothing system, squad stoves, shelters (issued and improvised) effects of cold on weapons, commo, vehicles use of arctic 10 man tent and yukon stove - tent & stove operational within 1 hr. tent & stove safety, fire prevention & emergency evacuation
FOOD & WATER	standard rations (3600 ca.) per day w/ supplements if possible or cold weather ration (CWR), 4500 ca., hot ration AM and PM 4 to 6 quarts (3 to 5 liters) per day
SHELTER & HEAT	arctic 10 man tent to provide warmth and drying facility yukon stove to heat arctic tent 2 squad type, single burner stoves per tent group lightweight, back-packable tents/tarps still in use to meet special requirements
ADDITIONAL SUPPORT REQUIREMENTS	medics and leaders begin mandatory inspections for frostbite - 2 to 3 times daily foot powder, fuel for squad stoves water purification and sanitation plan pioneer tools
TASK / MISSION LIMITATIONS	frozen ground begins to impede digging - pioneer tools needed as E-tool becomes ineffective

Figure 2

up the tent and operate the stove effectively. We recommend that they have the tent and stove set up within one hour of occupying a stationary position.

Leaders and medics should begin mandatory checks for frostbite. We recommend two or three times a day; mealtime is a good time for this. Weather will also start to affect the mission as digging becomes more difficult. Snow and ice may limit mobility for both vehicles and dismounted troops. With precautions, however, training and missions are still not extremely hazardous at these temperatures.

Temperature Zone III (9 to -19 degrees). As temperatures near and then dip below zero degrees, leaders need to continue the actions they took in Zone II. Soldiers must have a complete cold-weather uniform such as the extreme cold-weather clothing system (ECWCS). Footwear should be vapor barrier (VB) boots, preferably the white extreme-cold version. Gloves, even if they are insulated, may be useless in keeping hands warm; soldiers should have either trigger finger mittens with inserts or arctic mittens.

Since there is a greater chance of cold-weather injuries, leaders and medics must check more frequently. The number of checks now doubles, from two or three times a day to four to six times. Because soldiers are more prone to these injuries while stationary, they should be able to set up the arctic tent in 30 minutes so that

a warming shelter is readily available.

Defensive operations are likely to require engineer support to dig in; pioneer tools and entrenchment tools will barely make a dent in the frozen ground. Snow and the cold make movement even slower. Maintenance requirements increase as the cold causes materials to break more readily. Long endurance operations (greater than 72 hours) are now hazardous.

Temperature Zone IV (-20 to -40 degrees). Training or tactical operations are now extremely hazardous. Leaders need to check soldiers hourly for cold-weather problems. Soldiers need warming tents or shelters nearby. Since equipment breaks more often, more spare parts must be on hand. Soldiers in static positions are very vulnerable to frostbite, and moderate movement is required to keep them warm. Almost everything a unit wants to do takes more time.

Temperature Zone V (below -40 degrees). These conditions severely limit military operations. Leaders should now check soldiers almost constantly (every 30 minutes). Soldiers exposed to the cold for more than 30 minutes are likely to become cold-weather casualties. Thus, even with experienced units, commanders should limit missions that require extensive outdoor exposure. The only operations conducted should be those that are critical to the unit's survivability. Since we rate this training as extremely hazardous, we recommend that the bri-

gade commander approve any training that is conducted.

A recently published *Risk Assessment Guide* contains the modified worksheet as well as the planning considerations sheets. The Guide is available on request from the Northern Warfare Training Center, 502 Second Street, #2900, Fort Greely, Alaska 96508-2900.

Force protection is one of the elements of combat power. In the harsh and unforgiving environment of extreme cold regions, however, we cannot expect our junior leaders to take care of their soldiers without proper training.

Risk management requires that leaders first identify the risks of extreme cold weather and then take steps to limit them. We believe that our modified risk assessment card and the accompanying planning considerations will help leaders train more effectively. If they execute realistic but safe training, units will have self-confident soldiers who can win in the cold and under any other conditions.

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Command and Staff College Selection Board

COLONEL COLE C. KINGSEED

The primary mission of the Army Command and Staff College Selection Board is to select the best-qualified officers to attend a resident command and

staff college and to revalidate officers previously selected but deferred. I served on the 1995 board last summer and would like to share my personal observations

of the selection process. (These remarks are based strictly on my personal experience and reflect neither the official Department of the Army policy nor the opin-

ions of the remaining members of the board.)

The board was made up of 19 officers, all of whom were current or past battalion and brigade level commanders, with a general officer presiding. The board members were from all branches of the Army with sufficient gender and minority representation. The convening authority charged the board to consider, without prejudice or partiality, all eligible officers in accordance with the criteria established by the board's memorandum of instruction.

The board members operated under broad parameters: They used the "best-qualified" method of selection; they were authorized no personal knowledge of the candidates; and they were to vote independently without consulting each other. The selection numbers were specified by branch and year group in the memorandum of instruction. Over the course of his career, each officer is considered a total of four times, with the greatest probability of attendance in the first two years of eligibility.

With more than 5,000 packets crossing our desks over the course of the month we served, we had an average of two to three minutes to review an officer's file. Naturally, this varied with individual members, but we rapidly developed a system for evaluating a file. On the surface, this short time seems inadequate for assessing an officer's potential, but it was enough to determine trends during his career and to make an informed judgment concerning his future.

What was available to the members in determining the best-qualified officers to attend the resident course? Generally speaking, each file has four components: a full-length photograph, the officer record brief (ORB), any letters to the board president or late officer evaluation reports (OERs) that had not been posted to the microfiche, and the official military personnel file (OMPF).

The following are some comments on each of these components along with a few suggestions for those of you who will be preparing files for a future board:

Photograph. The board considered the photograph an essential element of the file and was satisfied that it repre-

sented the officer well. The photo was the first item that I examined.

Board members observed several common problems with the photos. Although the vast majority were excellent, a significant number were not up to date. Surprisingly, a good number of recently promoted majors had photographs that still showed them as captains. Black-and-white photos (used before the switch to color photos) generally had one of two problems—either a mismatch in rank or not showing awards earned since the photo entered the file.

The fit of the uniform is another important characteristic that catches a board member's eye. Does the officer appear overweight? Is he wearing the awards correctly? In this respect, the most common error was the misplacement of the Overseas Service Ribbon and the Army Service Ribbon.

My advice is to check the order-of-precedence chart, which is posted at most photographic laboratories, to ensure that your ribbons are in the proper order. In short, put your best foot forward. Wear your best uniform, see that it is well pressed, ensure that your awards and decorations are in the proper order, and personally examine the photograph before sending it to be posted to your file.

Although Army regulations require that photographs be submitted at least every five years, I recommend that you update your photograph after every promotion and before your records are to go before any selection board.

ORB. Turning to the ORB, I first checked to see whether the officer had updated it. A quick review of his assignment history, awards, and schooling gave me a good impression of what I could expect to see when I examined the microfiche. I also checked the currency of the officer's physical examination and his height and weight data. Source of commission was irrelevant to my assessment of the officer's file.

My impression is that the Army in general and Infantry branch in particular are doing a superb job in creating opportunities for officers to serve in critical positions of leadership. Each Infantry officer whose file I examined had served in several assignments as a platoon leader,

and the vast majority had served as unit executive officers. Every officer had commanded at company level with a substantial number commanding a second company. Following consecutive tours in TOE and TDA units, many officers had then served as small-unit instructors in the service schools, Reserve Officer Training Corps detachments, or the United States Military Academy. The Recruiting Command had also attracted a substantial number of junior officers.

Loose Documents. Not every officer had letters to the board president in his file. The vast majority of these letters involved the officers' requests to attend foreign schools instead of the Army's Command and General Staff College (CGSC) at Fort Leavenworth, or another service's command and staff course. The remaining loose papers in the packet were OERs that met the deadline but had not been posted on the microfiche file. Again, most files were current, but a good number of senior raters had forwarded complete-the-record reports or exercised their senior rater option to benefit officers whose records were going before the board.

OMPF. Undoubtedly the most important item in an officer's packet was his OMPF, consisting primarily of the microfiche containing OERs. The OER remains the single most effective tool to help the board member in his selection of the best-qualified officers. OER scores tend to vary with rater and senior rater philosophy. The board considered an officer's performance across the broad spectrum of his career, as opposed to focus on a single numerical score.

Here's how I examined an average file. Following a quick review of any entry in the *Commendatory and Disciplinary Data* (located at the bottom of the microfiche), I reviewed the OERs, beginning with the officer's initial report. Scores tended to be lower in the initial assignment because of the lack of experience normally associated with second lieutenants. All reports were important to me, but some—such as command reports—received greater scrutiny.

With respect to the OER, the duty title more than the duty description caught my eye. I then examined the *Performance*

Evaluation-Professionalism section in which the rater evaluated the officer's professional competence and professional ethics. Any number lower than a "1" in this section should have an explanatory comment, but it is not required in all cases. Height and weight data is important. If an officer does not show the appropriate level of military bearing and appearance—and if there is no comment concerning the requirements of Army Regulation 600-9, *The Army Weight Control Program*—he is at a severe disadvantage when compared to his contemporaries.

On the back of the OER, I checked to see that the rater had marked the *Always Exceeded Requirements* and *Promote Ahead of Contemporaries* blocks. The rater's comments on potential carried more weight for me than those relating to performance. An assessment of an officer's ability to perform at the next higher level of responsibility was crucial in my personal decision to select him for further military schooling.

The senior rater's comments on potential and his senior rater profile were the most important elements of the OER in helping me make my personal assessment. Senior raters who failed to differentiate among officers generally lost their votes. Some senior officers used the "stair-step approach," giving the rated officer an initial second block, regardless of his potential, then an automatic top block on subsequent reports.

The top box was unmistakably the one most frequently used, but a top-box, center-of-mass report did not help the board members truly understand the senior rater's intentions. In such cases, board members relied almost exclusively on the senior rater's comments to determine his true evaluation of the rated officer. Other common difficulties centered on senior raters whose comments focused more on performance than on potential.

Am I saying that if an officer received a "two block," his career was over? Hardly. In fact, most officers received what we would normally consider less-than-favorable reports. Board members were more interested in trends and whether the officer had improved with experience. Command reports frequently

WORD PICTURE	
6 +/-	TOP FEW/MUST SELECT SUPERIOR PERFORMANCE SUPERIOR POTENTIAL
5 +/-	DEFINITE SELECT CLEARLY ABOVE CONTEMPORARIES OUTSTANDING PERFORMANCE
4 +/-	SHOULD SELECT ABOVE CONTEMPORARIES SOLID PERFORMANCE
3 +/-	SELECT IF THERE IS ROOM COMPETITIVE AVERAGE PERFORMANCE
2 +/-	DO NOT SELECT MARGINAL PERFORMANCE
1	POSSIBLE SHOW CAUSE POOR PERFORMANCE

Figure 1

DEFERRED OFFICER WORD PICTURE	
YES	VALIDATE SUSTAINED LEVEL OF PERFORMANCE
NO	REMOVE RECORD OF PUNISHMENT LETTER OF REPRIMAND RELIEF FOR CAUSE MARKED DECLINE IN PERFORMANCE

Figure 2

had the officer receiving a "two block," followed by a "one block" on a subsequent report. These officers were highly competitive, and many were selected to attend a command and staff college. It was the rare officer who received only top blocks throughout his career.

After examining the OMPF, it was then time to vote. The board used the word picture form shown in Figure 1 in assessing an officer's file. They used a similar picture (Figure 2) in evaluating a deferred officer's file, but voted a simple yes or no (instead of a numerical grade) to validate or remove an officer from the deferred list.

Again, each officer voted independently, and recorders from the Total Army Personnel Command tallied the votes. Once the tally was complete, the board decided on the dividing line between officers deemed fully qualified and those not fully qualified. What was

readily apparent was that today's Army is a highly qualified and professional force.

It was regrettable that all the fully qualified officers could not attend the resident course, but branch allocations and the limited number of slots required that the board select the *most highly* qualified officers from the *fully* qualified list. For Infantry branch, this included three officers from Year Group (YG) 1982, five from YG 1983, and 30 each from YGs 1984 and 1985. If you are not selected in your first year of eligibility, I strongly suggest you enroll in the CGSC correspondence course. Don't wait for the second "go round."

Following the vote, the board then deliberated to validate deferred officers from previous lists and to nominate principals and alternates to attend foreign command and staff colleges. Special boards also dominated the agenda before the board officially recessed. Only in rare cases did the board identify officers for potential elimination or removal from promotion or school lists. All recommendations were ratified by a majority of the board members.

In summary, I am convinced that the selection process is sound, precludes bias, and facilitates the selection of the best-qualified officers to attend the resident course. Good performance across the broad spectrum of duties and over the officer's entire career remains the single most important prerequisite for selection to attend the resident course. As a general rule, I recommend you seek challenging jobs in which your rater and senior rater can assess your performance on a regular basis. Do the best you can, ensure that your file and photograph are current, and enjoy what you do. Leading infantrymen in today's Army is a challenging and rewarding enterprise. Make the most of it, and the schooling and promotions will fall into place.

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Helicopter Support to Infantry

Dusting Off the Lessons of the Past

COLONEL EUGENE H. GRAYSON, JR., U.S. ARMY, RETIRED

Earlier this year, I read two articles in Army branch bulletins that highlighted the tactics and techniques used by aviation units in support of ground commanders and identified potential problem areas. (See "Using Attack Helicopters," *INFANTRY*, March-April 1995; and "Air Ground Coordination in the hasty Attack," *AVIATION DIGEST*, March-April 1995.) Although both articles were well written, they caused me to suspect that lessons learned from countless integrated training efforts—and from several battlefields—may have been forgotten in some units.

Beginning in 1962 with the Howze Board, aerial gunnery support to infantry units was one of the primary missions conducted and tested on a daily basis. Those techniques were further developed and refined during the extensive two-year testing of the 11th Air Assault Division. Thus, by the time the 1st Cavalry Division (Airmobile) deployed to Vietnam in 1965, aerial gunnery support to the infantry battalions was fairly well locked in. As time went by, the standing operating procedures (SOPs) were refined, coordination procedures were improved, and command and control methods were developed. This support by armed helicopters (now attack helicopters) was vital to infantry units in Vietnam, and not only in the 1st Cavalry Division but in every division and separate brigade in country.

The result was a marriage between aviation and infantry that has been successful from 1962 to the present, and we

cannot afford to let it deteriorate. Most infantrymen who fought during the long war in Southeast Asia had no difficulties with the relationship. While the *AVIATION DIGEST* article implies that air-ground coordination in the hasty attack is a recent development, these earlier efforts included employing attack helicopters during rapidly planned and executed attacks—which most were in Vietnam. As a matter of record, most engagements were either hasty attacks or hasty defensive fights, and helicopter support was essential to the

Lessons learned from countless integrated training efforts—and from several battlefields—may have been forgotten in some units.

survival of the supported infantry.

SOPs were sound and well-tested; liaison officers were exchanged as necessary; brigade aviation officers in the S-3 shops were totally familiar with all aspects of upcoming operations; and aviation and infantry unit commanders worked closely together with respect to the impending operation and the aerial gunnery support that would be required. Moreover, when infantry units left base camps, they were moved by UH-1 "Huey" lift helicopters (now by UH-60 Black Hawks), enroute escort was provided by UH-1 gunships (later by AH-1 cobras), and long-range artillery was provided by Hueys or

Cobras in the formal aerial rocket artillery (ARA) units.

In the early 1970s, more advanced threats caused a change in the tactical attack helicopter support to infantry units. During the 1972 Easter Offensive, the introduction of radar-guided ZSU-23s, 37mm systems, and the SA-2 missile pretty well cleared the skies of command and control ships, ARA, and any other rotary aircraft that could previously travel more than 1,500 feet above ground level with some degree of safety. Subsequently, the planning focused on using new tactics such as terrain flight and nap-of-the-earth movement.

But coordination between aviation and infantry units for attack helicopter support did not stop just because the threat changed. If you consider the question, "Will the battlefield of tomorrow be any different in regard to the relationship between infantry and aviation," the answer will be an unqualified "No." Whether the infantry is Ranger, light, mechanized, or airborne, aviation units will continue to provide troop lift and attack helicopter support, along with a multitude of other support missions, just as they have since 1962. On tomorrow's battlefield, this marriage will have to be more sound than ever before, and—because of the increasingly lethal weapons in the hands of the threat we may face on that battlefield—teamwork will be absolutely critical.

The key, of course, is training together at every opportunity. With the emphasis on killing enemy armor and

deep attacks by AH-64s, it is easy to overlook supporting infantry units. There should be no doubt, however, that infantry units will continue to play a decisive role in any future war. If a conflict occurs in Eastern Europe, the role of infantry units will be critical. In those areas where restrictive terrain prevails, what other units besides infantry battalions and brigades will play the decisive role?

Even along the old general defense positions in the former West Germany, mechanized and motorized infantry would have occupied the bulk of the positions. Sixty percent of the territory where NATO formerly would have engaged Warsaw Pact forces was good infantry country.

Any conflict in Korea or Southeast Asia will heavily involve infantry units, and organic aviation units will provide attack helicopter support wherever the fight occurs. In fact, one of the disturbing facts about both of the articles mentioned earlier is that combat aviation battalions joined divisions in the 1970s, and the problems addressed in the articles were long ago resolved.

In the U.S. Army, Europe (USAREUR), which—like South Korea—was probably closer to the threat, aviation units were rapidly assimilated into their divisions, where they played a major role in providing fire support. No brigade ever went to Grafenwoehr or Hohenfels without an aviation unit in direct support, including an attack helicopter element. Tactics, techniques, and procedures—whereby instant fire support was provided—were perfected. Through continual liaison and training together, this close coordination saw aviation units become an integral member of the combined arms team, and although the divisions in USAREUR got a jump on those in the continental United States, it didn't take long for all divisions to fully understand just what the new aviation battalions brought to the fight.

Now we have aviation brigades assigned, and it is troubling to read about how coordination is being accomplished in one unit, as if it were a great revelation, coupled with the asser-

tion that attack helicopters cannot support hasty attacks in another unit. On the basis of this rich history of coordinated aviation-infantry teamwork, it is inconceivable that an attack helicopter unit would be unable to contact its supported ground unit during any attack, much less a hasty one.

Where were the SOPs in these units? Where were the liaison officers? What procedures had been worked out previously to cover such a contingency? Why couldn't the OH-58s properly identify the targets before clearing the attack helicopters to fire? How is it possible for an aviation unit in direct

Most engagements in Vietnam were either hasty attacks or hasty defensive fights, and helicopter support was essential to the survival of the supported infantry.

support to be unaware of the ground commander's intent or planned scheme of maneuver?

Somewhere during the planning, the supporting aviation unit should have been brought on board. The fact that the AH-64 has one FM radio and cannot talk to the infantry commander is inexcusable at a time where we worry about fratricide. That is why the team leader is in an OH-58 with two FM radios: to ensure that he has whatever details are needed to coordinate the mission. Marking friendly positions by the ground commander is a matter of SOP and after more than 30 years should not be a problem today.

It is absolutely imperative that the aviation-infantry bond be reinforced in response to the uncertainties of today's world. Every time an infantry unit goes to the field, a supporting aviation element should be placed in direct support, including an attack slice. If the division deploys, surely the aviation brigade will be included. If this integrated training is overlooked, there

may be a terrible price to pay when the chips are down and the bullets are real.

Infantry commanders need to realize that the attack helicopter is their greatest source of firepower. The ground commander has at his immediate disposal a capability that can influence the outcome of the fight at the forward line of troops, in the rear areas, or during a deep attack mission. It is also his most responsive system. But if the lesson learned from the past are not dusted off, updated, and revitalized in the SOPs of both infantry and aviation, we will continue to read about how one unit used attack helicopters and another shop up a supported infantry unit because it didn't know where the friendly troops were.

The Infantry School at Fort Benning and Aviation School at Fort Rucker are not far apart in miles. But they must reduce the distance between their branches out in the divisions and brigades to make sure that integrated training is on the right track. Likewise, they must ensure that doctrinal issues, tactics, techniques, and procedures are evolving to meet changing threats; and that infantry and aviation, along with other members of the combined arms team, are fully prepared to win on tomorrow's battlefield.

If they are not, then the experience that was gained back in 1962 has been squandered and at a possible waste of time and lives. I want to believe that they are accomplishing these tasks to ensure coordination and integrated tactics, and those time-tested and perfected lessons are still on the shelf and only need dusting off once in a while to ensure that the infantry-attack helicopter role on the battlefield is on solid ground.

Colonel Eugene H. Grayson, Jr., U.S. Army Retired, served with the 11th Air Assault, 101st Airborne, and 3d Armored Divisions and is now Professor of National Security Affairs at the U.S. Marine Corps Command and Staff College. He is a 1959 ROTC graduate of Virginia Military Institute and holds master's degrees from the University of Richmond and George Washington University.

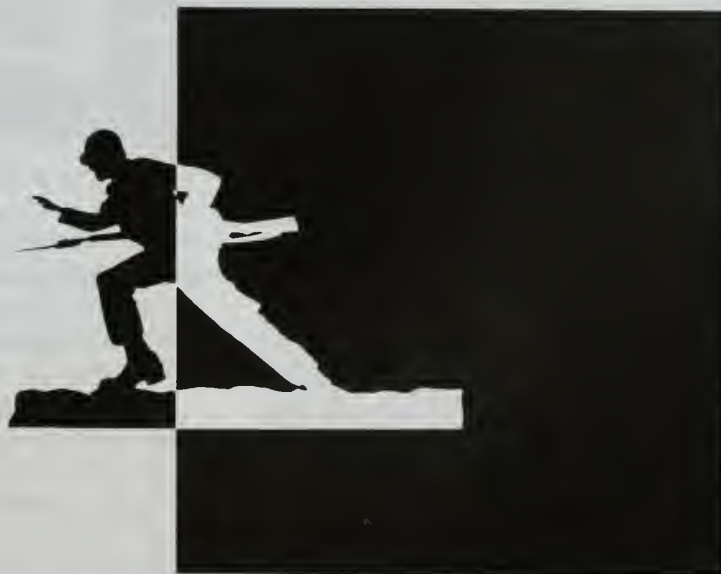
FIFTY YEARS AGO IN HISTORY

The first months of the postwar era challenged the United States. In spite of the Soviet Union's increasing intransigence, steadily worsening relations between the Nationalist and Communist Chinese, splits between other former Allies, instability in Korea, and the specter of atomic warfare, America nevertheless bowed to domestic pressure and set about reducing the size of a force that had numbered eight million men, and would number two million by the middle of 1946.

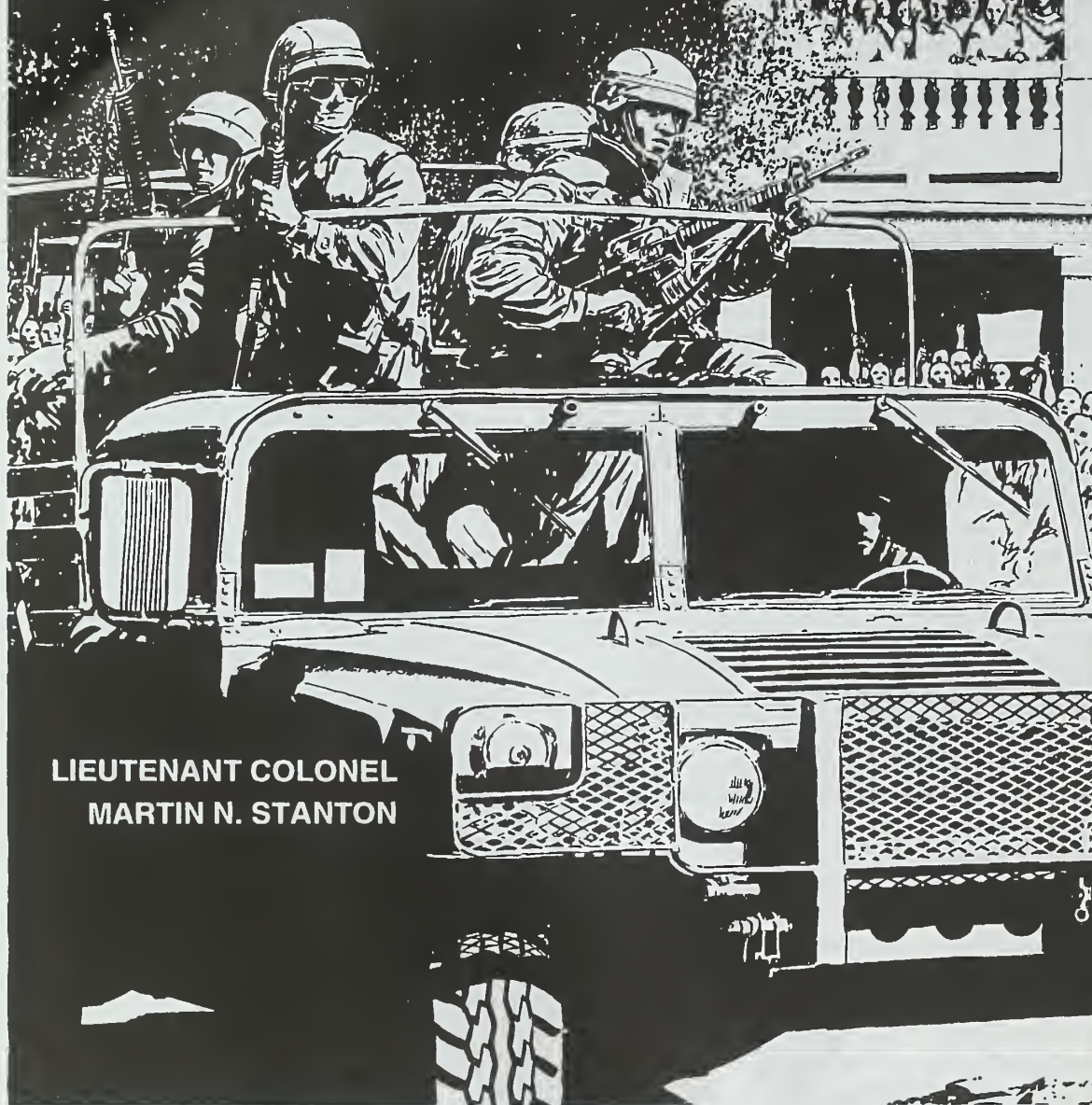
In the face of these reductions, the Soviets continued to gain strength, consolidating their economic and political gains. The U.S. Army underwent a massive reorganization as well; the Operations Division (OPD) that had maintained centralized control of wartime operations, was replaced by the pre-war General Staff system. The new organization consisted of five equivalent sections: Personnel and Administration; Intelligence; Organization and Training; Service and Supply and Procurement; and Plans and Operations.

These and other highlights of the postwar years have been compiled by Mr. Bud Hannings in preparation for his upcoming chronology of the Korean War.

- 8 January** *Following fighting between Nationalist Chinese forces under Chiang Kai-shek and Chou En-lai's Communist troops over the occupation of Manchuria, U.S. General George C. Marshall is able to convince both parties to agree to a cease-fire and to begin negotiations.*
- 10 January** *The first session of the United Nations convenes in London, with 51 nations participating.*
- 19 January** *The Iranian government charges the Russians with interfering in Iranian internal affairs.*
- 22 January** *The Commandant of the U.S. Marine Corps orders the Marines at Quantico, Virginia, to establish an infantry brigade for short-notice expeditionary force missions. The First Special Marine Brigade is established at Quantico before the end of the month.*
- 1 February** *Although the Soviet Union had agreed to withdraw its last troops from Manchuria by this date, the Russians failed to keep their word.*



Riot Control for the 1990s



LIEUTENANT COLONEL
MARTIN N. STANTON

In the past five years, U.S. soldiers and marines have been called upon to conduct riot control and quell civil unrest in five different countries, including our own. The injury of almost 200 soldiers by Cuban detainees in Panama is only one in a series of particularly violent riots involving military forces.

Unfortunately, most of our riot-control doctrine is still based on the 1960s civil disturbances in the United States. In these riots, military force (when it was used at all) was seen as an adjunct to civil authority. Some were merely large political demonstrations that got out of hand; others were more spontaneous acts of rage and anarchy, but they were only peripher-

ally violent toward the forces of authority. In the Third World of the 1990s and beyond, this may not always be the case.

The following characteristics are likely to influence riot control in the future:

Riots will normally be massive in scope. In our recent experience in Somalia, we faced riots consisting of thousands of people, if not tens of thousands. And in the West Bank and the Gaza strip, literally whole communities took part in resistance to riot-control forces. The fighting between the Zulus and supporters of the African National Congress is another example of the scale of many Third World riots. Situations in

which rioters significantly outnumber riot control forces are the norm rather than the exception.

Riots will be more lethal. Unlike many of the U.S. riots in the 1960s, and even the Los Angeles riots of 1992, many Third World riot situations involve masses of people who are clearly out to do each other harm; what looks like rioting is, in fact, a form of warfare. These conflicts can be between political factions (as in northern Ireland), tribal factions (Somalia, Rwanda, Burundi), religious factions (India, Pakistan), or any combination of these. Quite frequently, the ire and lethal intent of all factions is redirected when our forces try to intercede.

If experience in the past five years is any indication, forces deployed to low-intensity conflict or operations other than war (OOTW) situations are likely to participate in both riot control and some level of guerrilla warfare, often at the same time and place.

Units will have to react to both lethal and non-lethal acts of violence toward them. In Somalia, for example, soldiers had to contend with gunmen as well as rioters who were throwing rocks and attacking them with hand implements. Troops more than once found themselves pushing and butt-stroking their way through rioting Somalis to catch gunmen who had attacked them. The combination of lethal and non-lethal violence on the same riot scene makes response much more complex.

Riots will be more organized. Instead of being spontaneous outbursts of popular rage, many riots will be well organized by factional leaders, with designated chains of command and specific instructions to subordinate elements. Command and control among them is accomplished by runners, or through local telephones, cellular phones, or hand-held radios.

Rioters can be broken down into three basic groups: armed fighters, semi-armed rioters, and unarmed supporters:

Armed fighters are made up of a relatively small cadre of men with small arms and various hand-held antitank or anti-aircraft weapons. They can also have heavier weapons (as do General Aideed's militia in Somalia or the Bosnian Serbs). These fighters often display a high degree of sophistication in their tactics and should not be underestimated.

Semi-armed rioters, which constitute the majority of rioters encountered, normally consist of younger men, older boys, and some women, normally armed with non-lethal weapons—clubs, sticks, and tools—as well as knives and spears. These are used to attack or harass other factions and riot-control forces and to create gaps or find weaknesses through which gunmen can move.

Unarmed supporters, in numbers equal to or greater than the semi-armed group, act as a living screen around their armed and semi-armed fighters. They are not normally active in the fighting, other than to throw rocks. They will scatter if fired upon, and their presence in the riot causes confusion—which is the intent.

It cannot be overemphasized that all three of these groups normally operate through an identified and accepted chain of command, whether it is familial (tribal), religious, or political.

Riots may involve large numbers of women and children. Many of our potential adversaries—understanding only too well our reluctance to injure women and children (or even to search

or detain them)—often capitalize on this by using women and children to screen the movement of fighters or gunmen.

Factions in Somalia, for example, used large groups of women and children among their supporters to screen the movement of gunmen or grenade throwers. A group of 200 or so women could hide up to a dozen gunmen, as shown in Figure 1. We can expect this tactic to be used in the future in other places in the world. Urban guerrillas also use women to plant bombs, transport guns to assassins, and reconnoiter.

Riots will occur where there is no government and no law. Even a riot as massive as the one in Los Angeles in 1992 eventually yielded to the rule of law. To be sure, not all rioters were caught and prosecuted, but many were. They were apprehended by law enforcement, National Guard, and active duty military personnel and turned over to local authorities for detention. The rule of law, although challenged, still existed. In a failed nation, however, there is no rule of law.

One of the greatest problems in Somalia was what to do with an apprehended gunman or rioter once he was in custody. Who took charge of him? Neither of the major UN headquarters in Somalia had enough detention facilities to keep more than a fraction of the rioters or gunmen they captured. Often, there was nothing to do but let them go. At best, they could be taken to another town and dropped off in the hope that it would take them a few days to get back and start their mischief again.

Coalition forces involved in riot control will have differing standards. U.S. forces will often be involved in riot situations alongside the forces of other nations. Many of our coalition partners will not have the same perspective on riot control that we have—minimum or non-lethal use of force—and this can have awkward results. For example, if a youth throws a rock at a truck or a checkpoint, we would ignore him or, at worst, subject him to a little pepper spray (if he's close enough) or maybe some rubber bullets. Our rules of engagement (ROEs) do not normally consider a single rock-thrower a threat that merits lethal response. In other nations, however, throwing a rock at a soldier can get a person shot. Soldiers from these

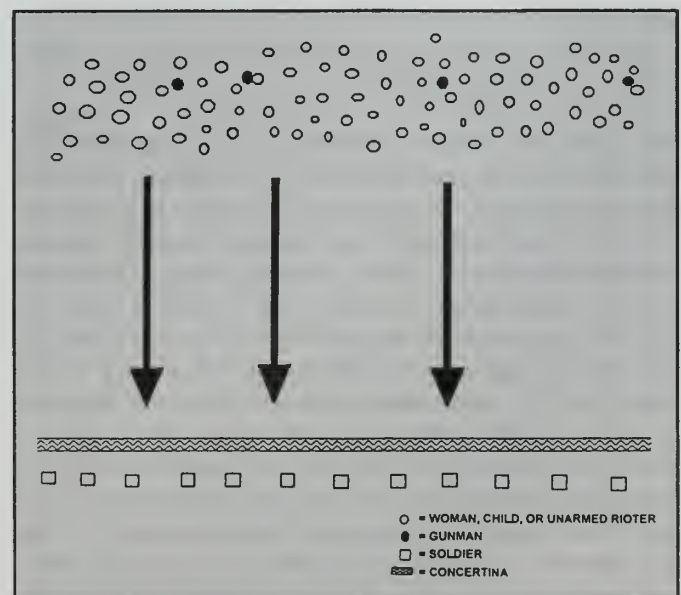


Figure 1

other nations therefore may feel no constraint in applying the same rules to people of other countries when deployed as part of a coalition force. This inconsistency of national response can be disruptive to the coalition effort.

A set of coalition ROEs must therefore be developed and closely followed. When agreement cannot be reached on certain aspects of the use of lethal force, it is better to use one nation's soldiers to conduct riot-control missions in a given area while the other nation's soldiers are used for other tasks—reaction force, perimeter guard, or convoy security.

Organizing to Meet the Threat

Since many Third World riot situations involve lethal and non-lethal violence at the same time, the most important weapons and other items of equipment are those that apply in both spheres of conflict. Rifles with fixed bayonets are an example of this, as are barbed wire, riot-control agents, and body armor. And these are all things that we would normally include when deploying to a low-intensity conflict environment anyway.

I have included riot-control agents in this list because few guerrilla movements have access to enough protective masks, and the use of chemical agents can reduce rioters' effectiveness, especially in situations where they have been trapped in a specific area and need to be flushed out. And we cannot be blind to the possible application of riot-control agents to lethal (combat) situations.

Some items that are used in riot control in the United States have no place on the streets of Third World cities. Obviously, the riot baton and shield have limited utility in an environment that could, at any moment, present deadly combat with small arms. Nor would face shields be useful, because they would interfere with firing and individual movement. Although the

Since many riot situations involve lethal and non-lethal violence at the same time, the most important weapons are those that apply in both spheres of conflict.

helmet protects against rocks, blows, and bullets, the improved body armor worn by the Rangers in Mogadishu is not as effective in hand-to-hand fighting as the older body armor with the collar and the shoulder plates. The new version stops bullets much better but doesn't cover as much body area.

Ideally, we should (at least initially) stick to equipment that has practical application in both lethal and non-lethal force situations: Rifles and bayonets instead of shields and riot sticks; barbed wire and chemical riot agents. Small specialty items such as the M33A1 and M5 dispensers might also be deployed initially when space is available. A good rule-of-thumb when task organizing a force is always to address the *lethal* threat first, even if it is significantly smaller than a non-lethal threat.

In more specific riot situations (those with a lower level of lethal threat but a high degree of physical violence), special-

ized equipment that has a violent but non-lethal effect on rioters can be useful. The following are some examples of this type of equipment:

Water cannons. High-pressure water streams have frequently been used in riot control in this century. As a non-lethal weapon, it has many advantages: It is powerful enough to knock people over, but its chances of doing permanent injury are relatively small (smaller than the chance of injury from a blow by a rifle butt, anyway).

Films of riots in Europe and Korea frequently show large water pumper trucks specifically designed for riot-control operations. These trucks shoot a stream of water that will easily knock over a grown man more than 50 meters away. The trucks normally have shatterproof glass and run-flat tires, and the water stream can be manipulated from within the cab. These trucks would be especially useful to riot-control forces in dealing with unrest in detention camps or in other situations in which the rioters do not have access to firearms.

A cheap but less sturdy substitute for water cannon trucks would be Air Force crash rescue trucks, which also have high-pressure hoses but are not hardened against thrown missiles. Another possibility would be fire trucks with high-pressure hoses operating off the city's fire mains (if it has any). Still another would be water pumped from a nearby source and sent through a high-pressure hose in the same manner as the high-pressure hoses used by Egyptian engineers to breach the Bar-Lev line along the banks of the Suez Canal in 1973. In these last two cases, employment would probably be limited to site defense because of the requirement to stay near a water source. The exposed hoses would also be subject to puncture by either thrown missiles or knives and would have to be guarded.

Rubber bullets or beanbags. These non-lethal projectiles, fired from specialized projectors, can knock a grown man down. They are extremely hard and travel at a pretty good clip; occasionally, people hit in the head die of their injuries.

The real drawback to rubber bullets is not that they are on the more extreme end of non-lethal violence but that the rate of fire is too slow. Against a mass of dedicated, charging rioters, troops firing rubber bullets could not discharge enough to avoid coming into physical contact. Their only real deterrent value is against rock throwers. In effect, rubber bullets are the riot-control force's "rock" and are best kept in vehicles accompanying the troops and brought out when the troops encounter a threat that warrants their use.

Pepper spray. These individual aerosol cans of highly unpleasant chemical agent are excellent for general issue to troops. In Somalia, they were perfect for keeping thieves from climbing onto trucks, and they can be used to repel annoying or threatening individuals from guard posts or checkpoints.

In addition to the old standbys—bayonets and rifle butts, concertina wire, chemical riot agents, water cannons, and rubber bullets—several new non-lethal weapons are being developed. These weapons take advantage of emerging technology in an attempt to broaden the scope of possible non-lethal response to riots. The following are examples of these new technologies:

Antitraction technology—Includes Teflon-type environ-

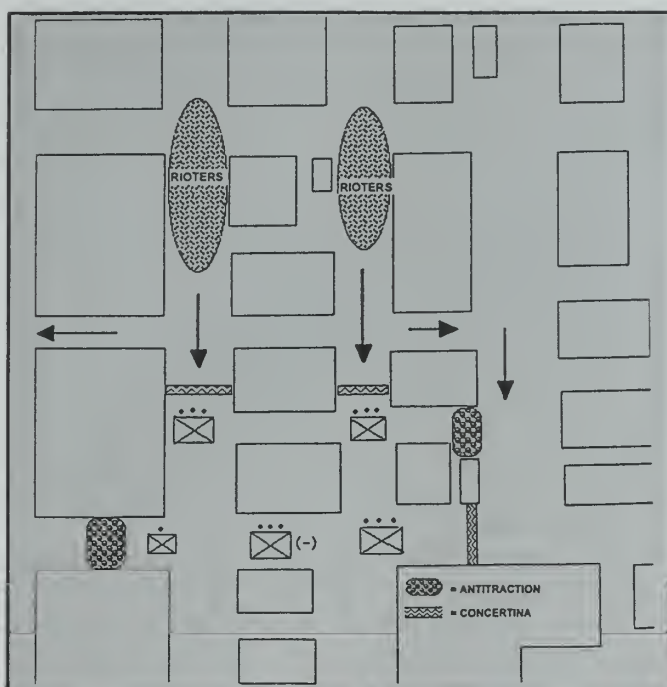


Figure 2

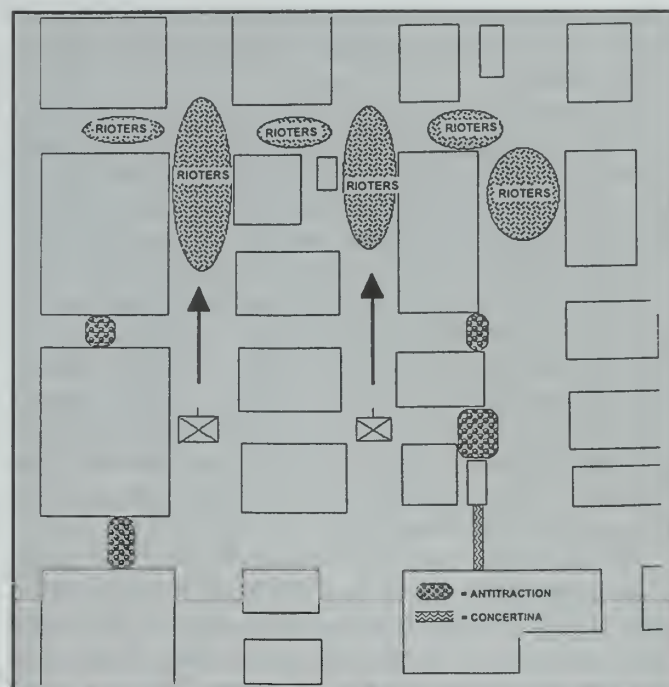


Figure 3

mentally neutral lubricants that make foothold or traction exceedingly difficult.

Sticky foam—an incredibly adhesive foam product that immobilizes people and makes them less effective.

Anesthetics—tranquilizers that can be used to put people to sleep, dispensed with either gas or darts.

Infrasound—low-frequency sound generators that incapacitate people by causing nausea, disorientation, and bowel spasms.

Microwave transmitters—directional devices that heat the skin of rioters to an unbearable degree as they move closer.

In theory, all of these things sound pretty good. Some of them (such as sticky foam) were fielded in the recent development of the U.S. Marine Corps Amphibious Ready Group to cover the withdrawal of UN elements from Somalia, although none were used. But these non-lethal technologies also have a few drawbacks. Sticky foam, which has been touted as a way to subdue violent people without injury, has serious drawbacks for large riot situations: It is short-ranged, and the dispenser is rather large and bulky. Worse still, it is an indiscriminate weapon that, once dispensed, will stick to anything or anyone, friend or enemy.

This brings up the unpleasant prospect of troops spraying sticky foam on a front rank of rioters and having those people propelled into physical contact with them by the momentum of the unfoamed rioters in the second rank. The prospect of troops and rioters glued together in such a situation is not a pleasant one.

Sticky foam is better suited to police work against the occasional fighting drunk than in a mass riot situation. The potential for getting your own people “foamed” is too great. It might be useful for blocking small secondary avenues of approach (which you know you are not going to want to use anytime

soon), but why bother? Concertina wire can serve the same purpose, and it's easier to clean up.

Antitraction technology (“slick-um”) has better application in riot control, but it is also a two-edged sword: It creates a *slow-go* or *no-go* area that the rioters have trouble traversing, but it does the same thing to troops. A key rule-of-thumb is to avoid using this stuff on any area you need to traverse any time soon. This will limit its use, since most riots take place in populated areas with important economic, political, religious, or military significance. Riot-control forces and the governments they represent can seldom afford to have key thoroughfares in a city turned into tropical skating rinks for days or weeks. Also, the antitraction material is not as effective on dirt streets, which is where most of the rioting in Somalia took place.

This technology could have limited application as a rapidly dispensed obstacle to crowd movement, sort of a riot-control FASCAM (family of scatterable mines). It would be a more defensive weapon in this case, quickly put down as an obstacle on avenues of approach to a critical site (Figure 2). It could also have limited application in offensive riot-control missions as a flank guard obstacle to prevent crowds of rioters from flanking riot-control forces (Figure 3). Whether it is used in the offense or the defense, if antitraction technology is used in riot control, the forces using it should have breaching methods available in case they have to cross the area.

Anesthetics also have drawbacks that could limit their employment in large riot situations. The principle of an anesthetic control method is, of course, to put a person or group of people to sleep quickly. These anesthetics would have to be extremely potent and capable of subduing people instantly or in no more than a minute or two. It does no good to anesthetize rampaging rioters with agents that don't take effect for

half an hour. Riot control forces will not be able to follow the rioters until the drug takes effect. The effect must be immediate and dramatic.

Unfortunately, this also limits practical use. In a chemical agent vapor form, an anesthetic agent would be dangerous and unpredictable. Unlike CS or CN gas or pepper spray, it would incapacitate its targets instead of causing extreme physical discomfort that causes them to flee the scene. An anesthetic cloud that is blown from a riot scene to a place where people are going about their own business could have lethal consequences in some cases, affecting vehicle drivers, mothers bathing infants in streams, and the like. It would also have an anesthetic effect on any troops who were not masked. The ten percent who didn't get the word would then be anesthetized, instead of just getting a good whiff of CS or CN gas before masking. The evacuation and protection of these men would complicate matters for the riot-control forces.

Dart anesthetics would have the same friendly fire considerations as any direct-fire weapon. Darts of this type would be most effective before physical contact between riot-control forces and rioters. If the dart guns were accurate enough, they could be used to target specific instigators. When evaluating the effectiveness of such a weapon in a riot situation, volume of fire would be the greatest concern. Could you shoot enough darts to make a difference? Having an anesthetic dart weapon within a range of 100 meters and a rate of fire of less than 10 rounds per minute would do little good against a crowd of thousands of people. The best projector for this type of riot-control weapon would probably be vehicle mounted and have a rate of fire of hundreds of rounds per minute. Care should be taken to aim at lower body extremities; even then, some eye injuries might be unavoidable.

The other problem with the mass anesthetization of rioters is what to do with them once they're unconscious. Leave them alone until they come to? Remove them to detention? (Each

most, a commander must protect his own men. There can be nothing more damaging than a soldier dying with a riot stick in his hand and a shield still on his arm—or a water cannon truck hit by a rocket-propelled grenade (RPG). We must not put our soldiers in the position of “taking a club to a gunfight.”

Task Organization

In organizing for a high-risk riot-control environment such as this, units should strive to maintain as much of their combat organization as possible. The problem with current riot-control organization, as outlined in Field Manual (FM) 19-15, *Civil Disturbances*, is that most of the formations are based on a four-squad platoon, specially organized for riot control. These formations are based on experience from the U.S. riots of the 1960s. They require units to re-task organize for riot control. And they do not take into account today's combined lethal and non-lethal threats.

The four-squad platoon organizations reflected in FM 19-15 are ad hoc and need to be replaced by platoons organized as for combat. All riot formations should be based on the three-squad organization for each platoon. The platoons must have all of their normal weapons, in addition to selected specialized riot-control equipment. Vehicles to carry this equipment should be assigned to each platoon, if possible.

Another key consideration is to keep as many men as possible involved in either riot-control formations or overwatch. This means using forces that cannot be employed in their normal functions, either because there is no need for that function or because the rules of engagement prohibit it.

In light, airborne, or air assault infantry units, company troops such as antiarmor and mortar sections might be armed with specialty riot gear (riot agent dispensers or rubber bullet projectors) when they cannot use their primary systems (there are no Dragon targets or a rule of engagement prohibits indirect fires, for example). The line platoons can then keep more people “up front” facing the rioters.

Battalion troops such as antiarmor and mortar platoons will also find the use of their primary weapons restricted. The antiarmor platoon's TOW HMMWVs (high-mobility multipurpose wheeled vehicles) can be remounted with 50-caliber or Mk 19 machineguns for this kind of combat; they can then bring large riot-agent dispensers quickly into place in their cargo compartments. The battalion heavy mortar platoon will most likely find employment in its primary mission of indirect fire (chiefly providing illumination) or will be used to employ riot agents or other riot-control equipment such as rubber-bullet projectors. The platoon might also be used as an obstacle emplacement team.

Troops should generally be organized into four elements:

Riot control—the forces actually deployed in riot-control formations facing the rioters. This element should consist of no more than two-thirds of the available force, less if possible.

Overwatch—the forces employed in overwatching the riot-control element and protecting them from a lethal threat. This element can be up to one-third of the available force; it should have snipers and automatic weapons as well as binoculars and observer telescopes.

A good rule-of-thumb when task organizing a force is always to address the lethal threat first, even if it is significantly smaller than a non-lethal threat.

rioter takes at least two men to carry, and how many can you stack in trucks without injuring them?) Do you flex-cuff them while they're sleeping?

Infrasound devices that induce nausea would be useful if rioters and troops can be separated by some sort of obstacle system. The key consideration with this type of system is that riot-control troops would be just as susceptible to it as the rioters. Any misdirection of the infrasound could incapacitate the riot-control forces. Many of the same considerations for infrasound devices would also be true for microwave emitters.

As forces spend more time in a country and gain a better idea of the lethal and non-lethal threats, more specialized riot-control equipment may be brought in and used. First and fore-

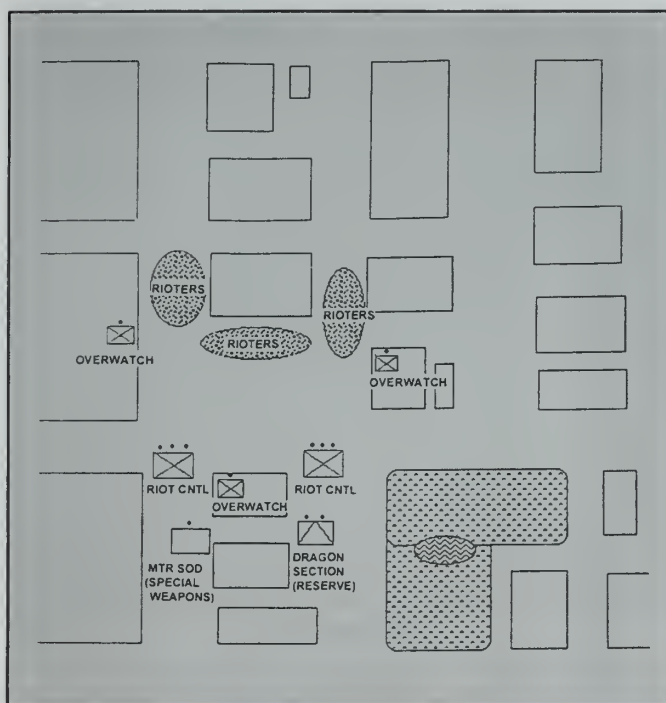


Figure 4

Reserve—units held out of contact in reserve to react to emergencies.

Special-purpose—units task organized to serve a specific function, such as mortar platoons organized to use riot agent dispensers or specific non-lethal technology weapons.

An example of this organization for an infantry company is shown in Figure 4.

Tactical Considerations

Although tactical considerations will vary considerably with each specific situation, some are universal to these types of operations:

Do not come to physical blows with the rioters if you can avoid it. Limit physical contact through the judicious use of obstacles or riot-control agents. Even if the troops in physical contact with the rioters are protected by body armor and have better weapons than the crowd, the sheer number of rioters may make this a losing proposition. Physical contact with rioters is one of the most dangerous things troops will face. Rioters will be able to hit them with tools, clubs, and farm implements, stab out with knives or shield gunmen carrying pistols or sub-machineguns who can get close enough to touch soldiers before bringing up their weapons to attack. In addition to all this, there is the danger of being knocked down and trampled.

Sometimes, physical contact is unavoidable. If troops must be sent in to push rioters out of an area, that area must first be softened up by riot agent dispersal, the use of water cannons or high-pressure hoses or perhaps one of the new non-lethal technology weapons. Then, troops must move swiftly and in large numbers, using vigorous but non-lethal physical violence to propel the rioters out of the area.

Use large forces for riot control. A company is the small-

est force anyone should even consider using for riot control, and this size should be used only for limited disturbances involving a few hundred people around a single installation. There were instances in Somalia in which several battalions were not enough to quell or even channel rioting, and the riots were just left to burn themselves out. Brigade-sized units should be the smallest used for riots in major metropolitan areas. (The troop strength in the National Guard, Active Army, and U.S. Marine Corps deployed to the 1992 riots in Los Angeles totaled almost two divisions.)

The principle is to quell the riot quickly by a massive infusion of forces to the affected area before it can spread. The more troops you use, the less likely you will have to react with lethal violence to a non-lethal assault. (For example, a detachment of 50 troops pressed by 1,000 rioters might have to shoot some of the rioters to keep from being trampled. A battalion of 400 troops would not have to resort to such extreme acts of self defense.)

Maintain overwatch of your forces at all times. To be effective in riot control, troops must sometimes do things that would be tactically unsound in an environment that had armed opponents—stand in blocking a street, for example. Although these troops can take cover quickly if fired upon, there is no doubt that they will be exposed initially.

Forces in riot-control formations must be protected by overwatch elements consisting of both automatic weapons and snipers. These overwatch teams and squads must be on the lookout for armed opponents that may be a threat to the troops in riot-control formations. The overwatching elements must stay in close radio contact with the troops and warn them when they are beginning to move beyond the overwatch team's ability to do its job. One of the greatest challenges to maneuver commanders in this type of riot control is coordinating the displacement of overwatch elements with the movement of riot-control forces.

The overwatching element can range from a few sniper teams up to one platoon out of every company, depending on the intensity of the lethal threat. Ideally, the overwatch would be broken down into at least two elements to conduct leapfrog displacement—one overwatching while the other moves.

Be prepared to move instantly from the non-lethal to the lethal. All troops must be armed for lethal combat—rifles with bayonets fixed and loaded magazines inserted, rounds chambered, on safe. No one knows when simple riot control can erupt into a close-quarters gunfight. Grenadiers and M249 gunners must also have rounds for their weapons.

The transition to lethal response is a lower-level decision, often made by the soldier himself when he sees the flash of a gun at close range. Soldiers and junior leaders must be well trained in the rules of engagement and in *shoot-don't shoot* situations. Leaders must also be alert enough not to overreact. A gunfight that erupts in a small part of a riot must not precipitate a wider, indiscriminate use of firearms in other sectors that have not yet escalated to lethal violence.

Use CS early. Using riot-control agents on groups of people forming in the streets helps break up riots before they gain momentum. Using a riot agent in this manner is better than

waiting for a full-blown riot to form and become lethal. Although gas does not deter organized urban guerrillas, it keeps rank-and-file supporters off-balance.

Use armored vehicles when they are available. Bradley fighting vehicles are ideal for riot control. They are large, hard to climb onto, and able to break down most street barricades. They also have a gun system that is ideal for engaging snipers in buildings, using accurate wall-penetrating fire that minimizes collateral damage. In addition, they can be used to carry specialized riot gear as well as first aid equipment and other mission-specific items that must accompany troops, especially heavy items that are too awkward to carry for more than a short distance.

Bradleys can also be used to evacuate casualties. Although M113 armored personnel carriers are also useful, they lack the protected gun capability of Bradleys. Tanks are useful for crushing barricades and for countersniper work, but they cannot carry internal stores. All armored vehicles must be protected by dismounted troops.

Armored vehicles should not be deployed in less than platoon strength for riot-control missions. The diagrams in FM 19-15 showing the use of armor in riot-control formations apply to most situations, but all the armored vehicles should not be put out in the middle of the street as shown in the field manual. Some should remain in overwatch to react to fire from the upper stories of buildings along the avenue of advance or approach (Figure 5).

Consider roadblock clearing. One of the standard tactics of rioters throughout the Third World is to build street-blocking barricades, often of flammable materials. Forces involved in riot control have to breach these barricades quickly while also maintaining security.

If none of the rioters are armed, breaching can consist of simply running an armored vehicle through the barricade. Unfortunately, armed persons may be positioned to cover the barricade, and an RPG team picking off a Bradley that has been sent forward to break the barricade could inflict needless casualties and encourage the mass of rioters.

Barricade clearing has to be a battle drill much like obstacle breaching. This drill would be different from the SOSR (suppress, obscure, secure, reduce) tenets of normal obstacle clearing. But it would still have four basic steps:

Overwatch—emplacing forces to observe well beyond the barricade and place accurate fires on buildings or other terrain features that dominate the barricade.

Eject—using non-lethal force to drive the mass of non-lethally armed rioters from the barricade.

Secure—occupying the barricade with troops and deploying troops beyond the barricade. (This phase also includes checking the barricade for booby traps or mines.)

Reduce—using armored vehicles, bulldozers, or engineer equipment to clear the obstacle and restore trafficability.

Training

Much of the training we do is already good preparation for riot-control operations. Squad and platoon battle drills and training in military operations on urban terrain (MOUT) are

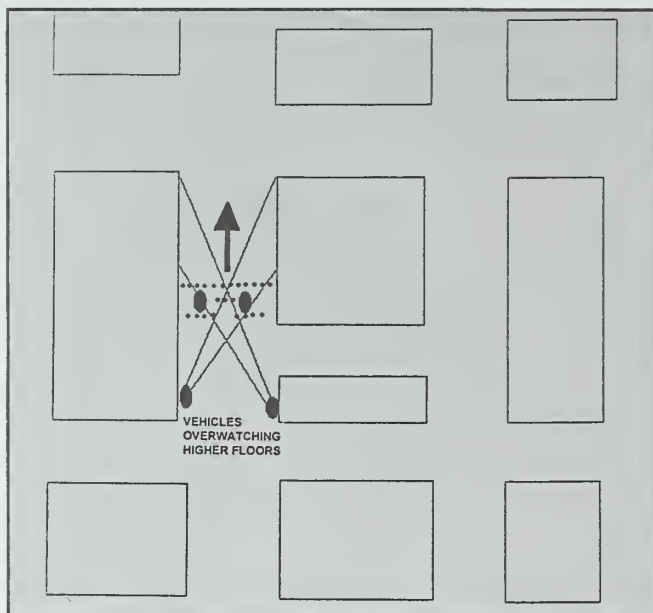


Figure 5

especially important. Units should also continue their emphasis on live fire, especially in close-range snap shooting techniques and *shoot-don't shoot* scenarios, as well as MOUT live fires. In addition, the following training techniques should be considered:

Pugil-stick training. This archaic hand-to-hand combat training technique is perfect for Third World riot control. It gets troops used to hitting people hard; more important, it teaches them how to take such blows and still keep their balance. Groin and shin pads should be included so that the combatants can also kick.

Chemical munitions employment. Throwing a few CS canisters to simulate chemical agents is as far as we get in most units, but all leaders down to squad level need to know the principles of employing riot agents as specified in FM 19-15. This is one of the best parts of the manual, and its doctrine is still valid, even in the extreme situations in which we may find ourselves.

The order or alert process that precedes the proper discharge of chemical munitions is just as important. Chemical agents cannot be randomly dispersed; they should be dispersed simultaneously on command after all units that may be affected by the discharge have had a chance to take protective measures. This should be especially stressed to coalition units from nations that may not be as strict about the discharge of such agents. Every precaution must be taken to avoid degrading or incapacitating riot-control forces with the undisciplined discharge of riot agents.

Troops must also be given target practice with pepper-spray dispersers to familiarize them with the containers and avoid accidents. Soldiers need some training and familiarization with pepper spray itself, as with any other weapon.

Concertina wire emplacement. Soldiers need to practice setting up and anchoring triple concertina fences. Barbed wire is such an important combat multiplier in riot control that a task force wire team should be created (normally out of the

engineer platoon but out of the mortar or antiarmor platoon if no engineers are available).

It should take no more than 15 minutes to block a four-lane street with a triple concertina fence. Engineers can link the wire to speed its off-load from trucks: The rolls are linked standing in the truck bed, the end staked down, and with the truck rolling and dispensing wire. Once the wire has been laid, pickets are pounded in to increase the wire's resistance. Ideally, two single strands should be laid side by side. This can be accomplished over several city blocks in a matter of minutes. The third layer can quickly be put on top. Provisions must be made for freeing people or animals that may be caught in the fence.

Water-cannon training. Since water cannons are not in the tables of organization and equipment of any U.S. Army unit, considerable training is needed before they are issued. Units can get an idea of the constraints of employing these and other high-pressure hose systems by training alongside their post fire departments or airfield crash teams. Timelines should be worked out for getting hoses into action, the range and flexibility of fire hoses, and what it will take to guard them. The soldiers should also gain an appreciation of the most effective ranges for employing high-pressure hoses.

Formation training, moving with overwatch. Obviously, the large-scale medieval-battle aspect of riot control cannot be replicated in training. But units can train on riot-control formations, in both moving and stationary situations, working with vehicles and overwatch. Most MOUT facilities are fine for stationary site protection riot control, but they are not big enough to include a movement drill. Units can practice movement in their cantonment areas, or along the streets leading to the MOUT site if these streets are built up enough. Leaders must practice the command and control of multiple overwatch teams as well as the riot formation itself.

The key benefit of this training is developing a feeling among the soldiers for their position and role in the formation and developing among the leaders an appreciation for how fast they can move and still maintain overwatch.

Many different battle drills can be developed; the following are some possibilities:

- Engage gunman at close range.
- Employ rubber bullet.
- Prepare for riot agent.
- Employ riot agent.
- Train teams to seize key rioters.
- Evacuate casualties.
- Reduce barricades.

Leaders deploying for operations that may include riot con-

trol would pick drills for the situations they were most likely to encounter.

Sniper training. Snipers must learn to scan for armed personnel in crowds, windows, rooftops, and doors and then to engage those personnel under less-than-ideal circumstances (for example, surrounded by a sea of moving people). Training techniques must be modified for this unique tactical environment: target identification using photographs of large crowds to begin teaching scanning techniques and target identification; shooting at moving target arrays consisting of E-type silhouettes superimposed upon each other, only one of which has a rifle. The emphasis of this training should be on observation and overwatch emplacement instead of ghillie-suit stealth.

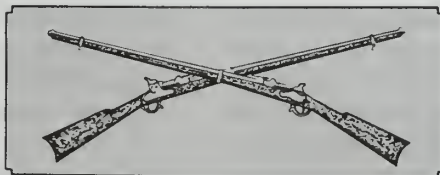
Snipers should also be able to relay intelligence quickly and directly to the riot-control forces they are overwatching—such items as crowd activities and strength; descriptions and last locations of gunmen they have seen and not been able to engage; and locations of roadblocks. Sniper and overwatch teams often have a better view than the forces deployed in riot-control formations, and they must be thoroughly trained in their reporting responsibility.

Armored vehicle riot employment. The biggest challenge in training armored forces to work in this type of extreme riot-control environment is coordinating their movement with that of the dismounted troops detailed to protect them—that is, neither outrunning them nor lagging behind them. Other tasks should include breaching roadblocks to ensure that drivers are trained in doing so without getting hung up. Crews need to practice techniques for scanning the upper stories of buildings and also engaging point-type targets in particular areas of a building.

Future U.S. deployments in support of operations other than war will see an increased emphasis on riot-control operations. We must come to grips with the fact that our riot-control doctrine is largely outdated and there is a new and rising anarchy in parts of the world that we are now ill-prepared to deal with. In Somalia, we had only a glimpse of that anarchy.

I have offered here a few observations and some possible solutions that should help units better train for such situations as our Army prepares to meet the challenges of the next century.

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COUNTERRECONNAISSANCE

IN TASK FORCE SECURITY OPERATIONS

MAJOR VICTOR A. JOHN

In warfare, common theory dictates that if you do not respect and learn from mistakes of the past, you are doomed to repeat them. German experiences on the Eastern front in the 1940s provide a historic perspective that supports the importance of effective security operations:

Perhaps the most impressive characteristic of Russian infantry in the offense was its unmatched ability to infiltrate enemy positions....practically every Russian attack was preceded by large-scale infiltrations of small units and individual men. During the first night, a few men would infiltrate German positions and vanish in the forest. During the second night, reinforcements would bring the force up to platoon strength. In this manner, provided no countermeasures were taken, a whole

*battalion group could be lodged in the rear of German lines within one week. The remedy [was] strongly manned lines, well organized in depth and continuously patrolled by men wide awake and alert. (From *On Infantry*, by John A. English, Praeger Publishers, 1984, pages 101-102.)*

Today, half a century later, potential infiltrators can range from Somali "technicals" and international drug smugglers to foes who are well trained and equipped. The enemy, in any case, is usually aware of the past and applies the lessons learned in crude but effective ways.

I want to discuss a number of issues associated with conducting counterreconnaissance (CR) as part of task force security operations. My intent is to help improve the way com-

manders approach the mission and help them develop a solid method to use in planning, preparing, and executing the CR mission.

The first part of the defensive battle that the brigade and battalion must win is the CR battle, and the deliberate integration of the battlefield operating systems (BOSs)—especially, intelligence, maneuver, and battle command—plays a significant role in the success of this fight. Commanders at every echelon must effectively visualize the fight, looking for information just as they would for the main battle area (MBA) fight.

Observations at the National Training Center (NTC), in both force-on-force and live-fire environments, have revealed two major points: Battalion task forces and company teams have problems in planning, preparing, and executing the CR fight, and visualizing and synchronizing that fight are the most difficult tasks for the commanders. The table shown here illustrates the effect of good versus poor reconnaissance efforts on units operating at the NTC.

Advancements in technology and the lethality of weapons make it vital that we deny the enemy his ability to observe and assess our own lethality and survivability. The BOSs provide a framework in which to examine the deficiencies and associated issues that affect the successful execution of the CR mission. The following discussion of BOSs will highlight issues as they apply to the planning, preparation, and execution of the CR mission, and will offer a brief overview of effective techniques.

Intelligence

Gathering and assimilating battlefield information lays the groundwork for successful security operations. Trends and observations indicate that the S-2's intelligence products—reconnaissance and surveillance (R&S) plans and situational templates—rarely support the development and synchronization of the CR plan. The lack of credibility and availability in S-2 products, along with their level of detail, inhibits the integration of intelligence into the planning process.

Field Manual 34-2-1, *TTPs for Reconnaissance and Surveillance and Intelligence Support to CR*, Chapter 10, defines specific requirements for the S-3 and S-2 in developing and executing the battalion CR plan: "The S-2 plays a critical role in developing the battlefield situation in enough detail to allow the S-3 to target, destroy, or suppress the enemy's R&S assets." This is the relationship that must exist between maneuver and intelligence.

All too often, commanders and staffs do not have a true appreciation for terrain or its effects on the ability to kill the enemy. A generic map reconnaissance is usually the extent of terrain analysis and appreciation. Attempts to integrate the use of terrain-based computer software products have fallen short of the inherent potential. Although technology cannot replace the commander's responsibility for conducting map and physical reconnaissance, commanders and S-2s should be familiar with the software and its potential link to both direct and indirect fire planning.

The S-2 must understand who his customers are (task force commander, S-3, CR force commander, and scout platoon

OUTCOME ACCORDING TO QUALITY OF RECON EFFORT				
QUALITY OF R&S EFFORT	NO. OF BATTLES	BATTLE OUTCOME		
		SUCCESS	FAILURE	STANDOFF
BLUE FORCE				
GOOD	13	9	1	3
POOR	50	4	38	8
OPPOSING FORCE				
GOOD	28	26	1	1
POOR	5	0	5	0

leader) and what they need; and these customers must clearly tell him their requirements.

Commanders need to know the answers to the following questions: Who is the enemy (regimental or division reconnaissance elements, mounted or dismounted patrols)? What type and number of vehicles will be in sector? What is their killing capability? Where will the enemy be vulnerable, and why? What is this enemy trying to do, where is he going, and how will he get there?

Most S-2s present this information in terms of a generic enemy composition and disposition, along with the enemy's most probable or most dangerous courses of action. The key is a clear articulation of the enemy situation so that soldiers can actually visualize his courses of action. Clear understanding of the enemy's likely courses of action promotes confidence and initiative in both leaders and soldiers.

The unit commander must have solid facts about terrain and logical predictions about the enemy. These facts include key terrain, natural obstacles and choke points, intervisibility lines, observation, cover and concealment, obstacles, and avenues of approach. The S-2's predictions must also account for enemy dismount and air avenues, both of which are often overlooked.

Accurate, responsive intelligence will insure the proper coverage of weapons, sensors, and optics on critical areas of the battlefield. The S-2's situational template gives the force an initial glance at the enemy and his tactics in relation to the terrain. If the maneuver element uses a 1:50,000-scale map, the S-2 should develop his product in the same scale, but the use of large-scale concept sketches can add to the actual working products.

Maneuver

Crucial in the forward area fight is movement relative to the enemy that puts him at a disadvantage. Commanders usually apply the looker-shooter concept as a standing operating procedure (SOP): The force array incorporates Bradleys on the flanks, tanks in the center as the main direct fire force, and scouts forward in sector as the eyes of the commander. The problem is that the array of forces on the ground results from a

drill rather than the commander's METT-T analysis. As a result, the final placement of individual vehicles and observation posts fails to make the most of friendly weapon capabilities, the terrain, or enemy vulnerabilities. If the commander does not personally inspect his force array as part of building the engagement area (EA), the first indication of positioning flaws will become evident when the enemy penetrates the sector unopposed.

Commanders often do not consider the complexities associated with forward security operations—the manning of passage and contact points, demolition guard responsibilities, rearward passage of lines through friendly EAs, and obstacles. The failure to address these requirements often leads to complications, ranging from fratricide to overall mission failure.

Commanders fail to consider the capabilities, as well as the potential risk, involved in incorporating all available assets into the CR fight. Assets often overlooked include dismounted in-

The deliberate integration of the battlefield operating systems plays a significant role in the success of the counterreconnaissance fight.

fantry, air defense artillery, engineers, mortars, and field artillery systems, including fire support vehicles.

Doctrine provides some specific guides to help the task force and the company team develop courses of action, but a rigid application of doctrinal fundamentals will not solve all operational problems. These fundamentals provide a common reference point to support the application of troop-leading procedures (TLPs). They also provide a yardstick against which to measure the completeness of task force and company team planning. Key task force fundamentals, in accordance with FM 71-2, *The Tank and Mechanized Infantry Task Force*, include the following:

- Specify the security force mission.
- Provide enough assets, as determined by the commander's analysis of METT-T.
- Establish security early and well forward.
- Put security in the right place.
- Provide adequate command and control for security.
- Plan to recover forward security elements.
- Plan for subsequent reconnaissance operations.
- Establish local security.

Failure to consider these fundamentals early in the planning phase will hinder forward security and MBA efforts. Commanders must focus and synchronize S-2 products with TLPs. True synchronization begins when operational graphics, platoon sector sketches, and crew range cards show a link with the S-2's situational template and the R&S plan. Range cards and sector sketches are a form of backbrief from subordinate to commander. The quality data in these products will alert the CR commander to make modifications to overcome conditions (deadspace, intervisibility lines) that may affect the di-

rect-fire plan. The application of direct-fire principles will increase the lethality and survivability of the CR force. Current direct-fire principles, according to the U.S. Army Infantry School's Student Handout (SH) 7-45, *Fire Planning Handbook*, include the following:

- Mass fires.
- See that fire plans are completely understood.
- Focus fires.
- Distribute fires.
- Shift fires.
- Rehearse the fire plan.

If an evaluation is made using the current principles, the fire plan can be effectively modified and evaluated. The commander must ask: Can the force mass at least two-thirds of its combat power at more than one location? Do the soldiers understand the fire plan? How will we focus fires both during the day and at night? These are just a few of the questions commanders must ask and answer to determine the effectiveness of the plan.

On today's complex battlefield, solid and proven methods are needed for planning and combat preparation. Commanders must develop and implement fundamentally sound fire planning SOPs at every training opportunity. Commanders at every echelon must understand the capabilities and limitations of weapons, both enemy and friendly. The fire plan must maximize the effectiveness of the available systems while producing target effects sufficient to destroy the enemy reconnaissance elements.

Fire Support

Synchronizing fires with maneuver increases the lethality and survivability of the force. Unfortunately, commanders tend to overlook the value of indirect fires in the CR fight. The lack of trigger development and a clear concept for fires negates the potential lethality of artillery systems in the forward area fight. Mortar platoons rarely occupy positions that can support the CR mission. If mortars are to be effective, responsive triggers must be planned and developed.

The task force must produce a fire support plan for the CR fight. Fire support officers (FSOs) in the task force and the CR force must plan fires in direct coordination with the S-2. Communication between the FSOs and the observers tasked to execute the fight is vital. The plan must focus on maximizing weapons effects against enemy vulnerabilities at critical points on the battlefield—choke points, dead space, dismount avenues, and all routes leading into and out of sector. The FSO must think like the enemy and consider where indirect fires will significantly disrupt or deny enemy reconnaissance mission objectives. Clearly defined engagement criteria, with full consideration of the enemy and his tactics, are extremely effective. Planners must understand the supporting role of indirect fires and the advantage it provides the friendly force when used with a clear task and purpose.

Battle Command

Commanders must continually visualize the battlefield. Task force commanders and S-3s tend to divorce themselves from the physical aspects of developing EAs and synchronizing all

available task force assets. The challenge for both the task force and the CR commanders is to visualize the battle and articulate that vision. If they do not, the result may be the failure of the CR fight and, as a result, the loss of the MBA fight.

The clear delineation of command relationships (attached, operational control, direct support, general support) is usually the exception rather than the rule. As a result, available assets—mortars, scouts, ground surveillance radar, and combat observation and lasing teams—are not synchronized with the maneuver force, and their capabilities are not fully exploited. Control is inherent in battle command. CR commanders often fail to establish command and control networks that effectively link observers to the maneuver elements. A lack of planning significantly inhibits the commander's ability to command and control his force. The collective nature of the CR force requires a communication network that supports the commander's intent responsively and efficiently. Figure 1 provides a communication concept based on a generic force makeup (Blue Team and Red Team represent platoon-size elements). The CR commander must develop and rehearse a communication network that meets force requirements as the METT-T analysis dictates.

The leader reconnaissance is becoming a lost art. Many attempts are perfunctory or pro forma instead of enabling the commander to confirm or modify initial plans. The task force commander, S-3, S-2, FSO, scout, and CR commander should meet forward in sector whenever possible to improve synchronization and visualization. Another technique involves backbriefs in the forward area on terrain that overlooks the decisive areas forward in sector. The commander's intent becomes clearer when leaders meet face-to-face on the actual terrain to discuss how and where to kill the enemy.

The question of who commands the CR force is one that neither doctrine nor a quick recommendation will answer. Potential CR commanders include the S-3, the HHC commander, the company or team commander, and the scout platoon leader. METT-T must determine who commands and controls the CR force. Whoever this is, the key to success are

The S-2 must understand who his customers are and what they need; and his customers must clearly tell him their requirements.

leader visualization, definitive command relationships, aggressive troop-leading procedures, and controlled execution.

A synchronization matrix will address the command challenges presented by the CR mission (Figure 2). This matrix helps the commander visualize the battle, identify critical decision points, and conduct rehearsals. It should be a working document, complete with updates and dissemination to all.

The synchronization matrix is a valuable tool if used to coordinate, visualize, and execute the battle from start to fin-

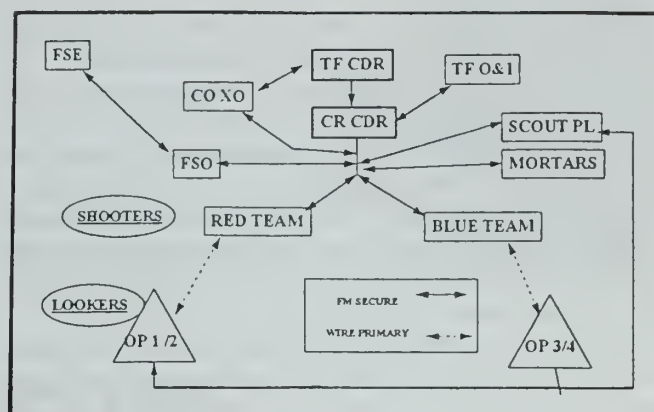


Figure 1

EXECUTION/SYNCHRONIZATION MATRIX				
<p>Task organization: 2 Mech plt; 1 Armor plt attached (DTG); 1 Mortar plt OPCON (DTG); 1 Scout plt attached (DTG)</p> <p>Mission: Co B defends BP1 (grid, DTG), conducts CR along PL Oolan (DTG), assists passage of covering force, on order defend BP1 (grid). Commander's Intent: Destroy enemy recon (division and/or regiment) in EA North and South 1&2, combining the effects of obstacles, direct and indirect fire. Destroy 1MRB in EA Main with direct fires supported by a blocking obstacle.</p>				
ITEM	ENEMY ACTION	OBSERVER ACTION	SHOOTER ACTION	COMMENTS
1	None	Scout route to PL OOLAN/ occupy DP 1-3 NLT (DTG)/ confirm surveillance plan/ 50% observer coverage	Blue and Red occupy FWD BPs NLT (DTG)	White, develop Main BP for Blue and Red; DIO provide relief to Blue or Red Team
2	CF contact with div recon	100% observer coverage of EA North & South (1)	FWD elements REDCON 1	White, continue BP preparation
3	Div recon destroyed	50% coverage EA North & South (1)	Red, make contact with CF lead element at contact point (G)-O/O close Lane GREEN -Blue; observer cover EA North & South for leakers until passage complete and Lane GREEN is closed	No change
4	Regt recon detected vic NA 1	100% coverage all EA	Red & Blue occupy ABF pane Red, NDTH 1&2 (primary)-SOUTH 1&2 (all) Mortars prep WP 001 & 2 FSO prep WP 002 & 3	White, REDCON 1
5	Enemy BMP ID EA North (1)	OP 2 adjust fire WP001 when executed	No change	"Red, TOW, EA North at your cmd"; mortar fire WP001 at my cmd
6	2 BMPs ID EA North 1	OP 2 continue updates	Red engage at your cmd Mortars fire WP001	

Figure 2

ish, including the occupation of the screen, continuous security, defeat of the enemy's reconnaissance elements, and destruction of the enemy's main body as the culminating point.

Rehearsals must be conducted if the collected task force, brigade, and company team assets are to operate as an effective force. Commanders must aggressively plan to employ such rehearsal techniques as backbriefs, along with full or partial rehearsals as time permits. Rehearsals bring any flaws in the plan to the surface for immediate resolution and also help the soldiers envision the fight. A rehearsal using secure FM radio communications is a valuable tool during hours of limited visibility. The first engagement will be costly if the unit does not rehearse.

The Forgotten Three

Three of the BOSs—logistics; mobility, countermobility, and survivability; and air defense—are rarely considered as part of the CR mission or security operations as a whole. Casualty evacuation and the overall sustainment of the CR force usually result from reaction instead of deliberate, coordinated planning. The lack of planning reduces the survivability of the soldiers and the maintainability of the equipment.

The positioning of the forward and main aid stations requires careful consideration. Providing the CR force with

additional maintenance and medical support will allow the unit to fix assets forward and also allow it some autonomy.

Company team commanders rarely consider the use of obstacles to shape the battlefield in the forward area. Obstacle integration, and the advantage it gives direct and indirect systems, should be an immediate consideration in all fire plans. Company team hasty and protective obstacles are also a critical consideration that requires immediate integration. Obstacle planning must be continuous and done to support the direct fire effort and protect the force.

Because of its often static role, the CR force is separate from the main body and therefore vulnerable to enemy air attack. The CR force is particularly vulnerable to enemy air during the occupation and collapse of the forward area screen. The commander who fails to consider this contingency will suffer unnecessary losses for this failure. Active and passive

Commanders must actively prepare, rehearse, and execute a collective air defense plan.

air defense measures must be part of the overall task force and CR force plan. Commanders must actively prepare, rehearse, and execute a collective air defense plan.

Doctrine provides a foundation for company team planning and preparation. FM 71-1, *The Tank and Mechanized Infantry Company Team*, identifies the CR force as consisting of two elements—surveillance (scouts) and counterreconnaissance (company team).

In addition to FM 71-1, the CR commander's primary guides include ARTEP 71-1 MTP; *Mission Training Plan for the Tank and Mechanized Infantry Company Team*; FM 7-10, *The Infantry Rifle Company*, FM 7-20, *The Infantry Battalion*, and FM 17-95, *Cavalry Operations*, and their discussions of security operations. As a part of security operations, the company team screen must include one or more of the following tasks:

- Deny observation of main defensive positions.
- Destroy enemy reconnaissance.
- Deceive enemy reconnaissance as to the location of the main defensive position.
- Deny enemy flanking maneuvers.

The many potential screen tasks highlight the need for task force and CR commanders to provide a clear task and purpose to focus subordinate TLPs. The execution of security operations in Panama, Southwest Asia, Haiti, Africa, or Korea will have unique requirements as dictated by METT-T, but the processes we implement to prepare our soldiers must be consistent and reliable, with confirmation and modification through training.

Doctrinally, the screen provides early warning, impedes and harasses the enemy with supporting indirect fires, and within its capability destroys enemy reconnaissance elements. Unit METLs usually do not support the CR mission. Units rarely address the screen or CR mission in their home-station training.

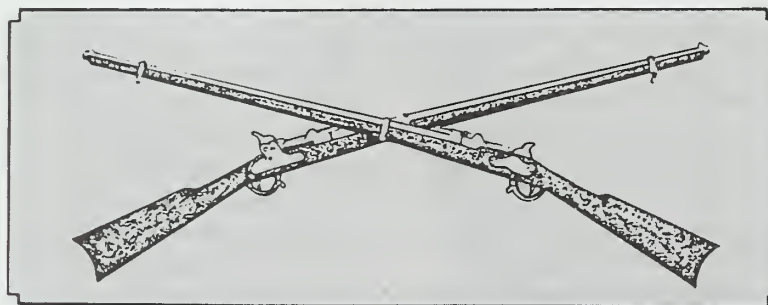
Critical tasks as expressed in FM 71-1 include the following:

- Maintain continuous surveillance of all high-speed approaches into the sector.
- Destroy or repel all reconnaissance patrols.
- Locate the forward security element and determine its direction of movement.
- Make the best use of artillery and mortars to delay, confuse, and destroy the enemy.

The outline of potential company team tasks in FM 71-1 further amplifies the need for METL tasks that support the development of operational processes to enhance the planning, preparation, and execution of the CR mission. Aggressive planning and preparation by both the task force and the CR commanders will reduce stress on soldiers and make the most of the force's lethality and survivability.

Commanders must develop, train, and modify the processes used in security-oriented troop leading. Feedback from training will ensure that any necessary modifications are made to increase staff efficiency and overall unit combat readiness. Doctrine is the start point, training links the soldier with doctrine, and combat confirms and modifies both training and doctrine.

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TRAINING NOTES



Why T-P-U? Bradley Crew Evaluation

SERGEANT FIRST CLASS RONALD D. KUYKENDALL

The goal of Bradley crew evaluation has always been to challenge crews to meet realistic threat-based standards while developing warfighting skills concurrently with gunnery. The latest Field Manual 23-1, *Bradley Gunnery*, dated 15 March 1996, reflects this goal of evaluating the ability of Bradley crews to outperform the threat and also the warfighting skills associated with these gunnery tasks.

To understand the evolution of crew gunnery evaluations, it is helpful to look at the three different types of evaluation procedures in historical sequence.

Scoring Matrices

Units have used scoring matrices since the introduction of the Bradley fighting vehicle in 1983. The developers of gunnery doctrine based the scoring matrix time standards on a determination of where a crew's proficiency should be in relation to its past performance. Doctrine has adjusted these standards through the years to match the increases in crew proficiency.

A point system reflects crew performance; each engagement has a 100-point maximum score. "Time to kill" standards determine an engagement's point value (Figure 1). As an example, if a crew hits both targets during a multiple engage-

ment in 33 seconds, the score will be 82 points for that engagement. If the crew hits only one target during this engagement, the score is 41 points. Bradley crew evaluators (BCEs) determine the engagement's point value by consulting one of the six scoring matrices found in previous versions of FM 23-1.

The BCE subtracts failures in any crew duties from the "time to kill" points. These crew duties are assigned point-value penalties as follows:

A 5-point reduction for:

- Improper fire commands.
- Firing before receiving the command

FIRE or announcing ON THE WAY.

- Using incorrect engagement techniques.

- Selection of improper ammunition or weapon for the target.

- Incorrect driving techniques.

- Failure to return to a defilade position after completion of a stationary engagement.

A 15-point reduction for:

- Not using the "Z" pattern for area engagements with coaxial machinegun or 25mm automatic gun.

A 30-point reduction for:

- Failure to raise the TOW launcher and

TIME (SECONDS)	POINTS			
	KILL 1 TARGET	KILL 2 TARGET	KILL 1 AUXILIARY SIGHT/NBC TARGET	KILL 2 AUXILIARY SIGHT/NBC TARGET
30	50	100		
31	47	94		
32	44	88		
33	41	82		
34	38	76		
35	35	70	50	100
36	32	64	47	94
37	29	58	44	88
38	26	52	41	82

Figure 1. A portion of Scoring Matrix 4.

conduct self-test during a defilade engagement.

- Failure to be in MOPP-4 (mission-oriented protective posture 4) with all hatches closed during an NBC (nuclear, biological, chemical) engagement.

- Bradley commander's (BC's) failure to fire a BC-specific engagement.

- Engagement of friendly targets.

- Use of integrated sight unit (ISU) during an auxiliary sight engagement.

If a crew hits both targets in 33 seconds and fails to give a proper fire command, it receives a 5-point reduction. (Time to kill score for the engagement is 82 points, minus 5, resulting in a score of 77 points.) BCEs cannot subtract more than 30 points in crew cuts from the time to kill points per engagement: If the time to kill is 100 points, and the deductions amount to 35 points, the total is 70 points instead of 65.

These scoring matrix procedures initially provided a fair picture of crew proficiency. But doctrine based this system on an estimation of where crew performance should be and did not provide the realistic standard of other evaluation procedures.

Point Calculation Worksheets

In 1991 the Armor School introduced the Point Calculation Worksheet (PCW) concept during a Bradley Master Gunner conference at Fort Benning. Members of the Bradley Proponency Office at Fort Benning and the Cavalry Weapons Division from Fort Knox jointly developed the worksheets for the Bradley. The Infantry School published these scoring procedures in Change 1 to FM 23-1, dated 24 March 1994, as an alternative to the scoring matrices. During this test period, the Bradley Proponency Office collected data from units using these procedures to determine their application as a replacement for the scoring matrices.

PCWs are part of a point-type scoring process that uses threat data from the Army Materiel System Analysis Activity as the base time standard for Bradley crew gunnery. The time required for a specified variety of threat vehicle to hit a Bradley established these time standards. The time standards reflected the

BMP-2, TWO CONDITIONS											
METERS	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
TIME (SECONDS)	POINTS										
11	100	100	100	100	100	100	100	100	100	100	100
12	96	97	97	98	98	98	99	99	99	99	99
13	93	94	94	95	95	96	97	97	97	97	97
14	90	91	92	93	93	94	95	95	96	96	96
15	87	88	89	90	91	92	93	93	94	94	94
16	75	79	81	83	85	86	88	88	91	93	98
17	70	74	78	80	82	84	85	86	88	91	95
18	64	70	74	77	79	81	83	84	86	88	93
19	58	64	70	73	76	78	80	82	84	86	91
20	52	58	64	70	73	75	78	79	82	84	88
21	46	52	58	64	70	73	75	77	79	82	86
22	40	46	52	58	64	70	73	75	77	79	84
23	34	40	46	52	58	64	70	72	75	77	82
24	28	34	40	46	52	58	64	70	72	75	79
25											

Figure 2. A portion of PCW showing BMP-2, two conditions.

time a threat vehicle crew took to give a fire command, the cyclic rate of fire of the weapon system, and the time of flight of its burst to the Bradley's position. The farther away the threat target, the longer that target took to hit a Bradley. The Bradley crew therefore had more time to hit the threat target.

PCWs have three additional timing conditions: threat vehicle moving, BFV moving, and NBC conditions. Each condition adds to the time the threat vehicle needs to engage a Bradley. A moving threat target is given more time because it is more difficult for a threat vehicle on the move to engage a Bradley. A moving Bradley is given more time because it is more difficult for a threat vehicle to engage a moving target. NBC conditions are given more time, not because the Bradley crew must wear masks, but because the threat crewmen themselves must wear masks while engaging the Bradley. A Bradley crew does not receive more time if it uses the auxiliary sight or the manual hand stations or if the Bradley commander is firing the engagement, because these methods of engagement have no effect on the threat's ability to engage the Bradley.

The threat's time of hit, referred to as "threat-based time," provides a point value of 70. Past crew performances from unit score sheets determine times for the 100-point values—the time it takes a good crew to achieve 100 points

using the scoring matrices. Averaging the points to seconds provides the point values, per second, between 70 and 100 points. The lethality of the given target type determines the point values from 0 to 69. For example, in a hypothetical engagement with a BMP-2, the Bradley crew loses 6 points for each second of delay, beyond the threat-based time, in engaging the target.

There are PCWs for the BMP-2, BRDM, and BTR-70 vehicles, the HIND-D helicopter, and dismounted troops—a total of 16 different worksheets that include all of the timing conditions. Figure 2 shows a portion of the BMP-2 worksheet with two conditions.

BCEs determine a crew's point score based upon the time it takes to hit a target at its range and under the given conditions. The evaluators time each target individually. The result of multiple target engagements is an average of the two individual target hit values. For example, a BFV on the offense in NBC conditions engages one stationary BMP-2 at 1,000 meters and another at 1,200 meters. The crew hits the vehicle at 1,000 meters in 10 seconds and, 11 seconds later, hits the other one.

The crew receives 100 points for the first and 100 points for the second. The BCE determines the engagement score by averaging the two individual scores—in this case 100. Crew duties are penalized the same as with the scoring

matrices. For example, a target score of 100 points minus 30 points for failing to be in MOPP-4 equals 70 points.

The highlight of the PCW is its threat-based methodology, which gives crews a standard that is based on threat capabilities. But data collected from units using PCWs has revealed several issues. One of these issues was the 100 point value assigned for each engagement. Crew qualification score sheets provided the data for these point values. This limited the data to particular range bands—1,000-1,200 or 1,200-1,400 meters—because the qualification table requirements placed most targets within these range bands. Therefore, 100 point values outside these range bands were not as easy to define. Some units felt the 100 point values were too stringent while others felt they were too lax—primarily because of differences in range facilities and target lateral dispersion.

Another concern was the complexity of the BCE duties. Because the timing procedures used with PCWs were more complex, the number of timing matrices increased from 6 to 14. A previous concern about the declining proficiency of BCEs added to this concern. Another issue was the lack of realistic timing procedures for multiple target engagements in the offense. The Bradley's exposure time to a second target did not start until the first target was hit, while in combat, both targets would be trying to hit the Bradley simultaneously, and exposure time for both targets would begin at the same time.

The problem with this timing procedure is that it establishes an unachievable standard. Although crews have time to achieve 70 points (threat-based time) for the engagement, it is humanly and mechanically impossible for them to achieve 100 points on most engagements. Using the previous example, if the crew took 10 seconds to hit the first BMP-2 and then another 11 seconds to hit the second BMP-2, the recorded time to hit the second BMP-2 is 21 seconds, not 11. The time of 21 seconds falls significantly below a possible 100 points. Adjusting the 100 point values to compensate for this (21 seconds = 100 points) does not provide enough of a point spread (70-100) to be useful in statistically reflecting crew proficiency.

T-P-U SUBTASKS

CRITICAL

Crew engages target(s) using the auxiliary sight.
Crew engages target(s) in an NBC environment.
Crew engages target(s) using manual controls.
Bradley commander engages target(s) using the commander's hand station.
Crew does not engage friendly targets.

LEADER

Bradley commander uses proper fire commands for each engagement.
Bradley commander ensures most-dangerous target is engaged before least-dangerous.
Bradley commander ensures the proper ammunition and weapon system for the target(s) are selected in accordance with target ammunition requirements and unit engagement criteria.
Bradley commander ensures the vehicle moves at least one vehicle length when moving from a turret-defilade to a hull-defilade position and when returning.

Bradley commander ensures the gunner does not fire before receiving the command FIRE.

NON-CRITICAL

Bradley commander or gunner uses proper response terms in support of leader subtask standards.
Bradley commander or gunner uses proper engagement techniques.
Driver uses proper driving techniques.
Crew uses proper defensive techniques.

ENGAGEMENT ASSESSMENTS

T = A GO on task standards, a GO on all critical and leader subtask standards, and no more than one NO-GO on a noncritical subtask standard.
P = A GO on task standards, a GO on all critical subtask standards, with a NO-GO on one or more leader subtask standards or a NO-GO on two or more noncritical subtask standards.
U = A NO-GO on the task standard or on one or more critical subtask standards.

During this period of the evolution of crew gunnery evaluation, the Bradley community had to consider several questions:

Do we retain an evaluation philosophy based on crew performance (scoring matrices)? Do we attempt to have a mixture of performance and threat-based evaluation (PCW) and accept the trade-off of realistic timing standards to retain a point system? Or do we develop a true threat-based system that achieves the goal of challenging crews to meet the realistic standard they may face in combat?

The solution was a GO/NO-GO, threat-based system referred to as T-P-U—trained, needs practice, or untrained.

T-P-U

T-P-U evaluations were first introduced by the Bradley Proponency Office in November 1994 during a master gunner work group meeting, which included a coordinating review of the FM 23-1 preliminary draft. During this meeting, the group discussed the PCW issues

along with several other concerns. A prevailing issue was the inflated point systems and the feeling that they would never provide a clear picture of a crew's true proficiency. Battalion averages of 995 points were an example of this problem.

T-P-U represents a fundamental shift in gunnery philosophy toward a standard that is based on the threat's capability and includes the warfighting skills needed to perform gunnery tasks. It also allows units to design gunnery scenarios with realistic threat arrays. T-P-U evaluates each crew engagement on the basis of the GO/NO-GO criteria for the engagement task and its subtask standards.

Crew engagements have a task standard with *critical*, *leader*, and *noncritical* subtask standards (as shown in the accompanying box). The task standard requires the crew to hit a given target with an appropriate type of ammunition and number of rounds and without exposing the Bradley beyond any of the presented targets' threat-based time. Critical

subtasks are tasks that a crew must accomplish to meet the engagement task standard; leader and noncritical subtasks support the engagement task, but have little effect on a crew's success or failure in accomplishing the engagement task. The crew's T, P, or U is based on its performance while conducting the applicable task and its subtasks.

The Bradley's maximum times of exposure to a target are the threat-based times used with the PCWs. Using only the threat-based times, and combining vehicles into threat categories, has reduced the number of timing matrices to four. These are referred to as BFV exposure timing matrices (see sample matrix in Figure 3).

A crew that performs the task to standard (hits the target) within these times is a GO for the task standard; in other words, "Hit him before he hits you." If a crew meets the task standard but does not perform a *critical* subtask to standard, it receives a NO-GO for the critical subtask and therefore a "U" for the engagement.

As an example, if a crew hits two targets without being overexposed to either but fails to put on protective masks, it receives a "U" for an NBC engagement. The rationale is that if the crew conducted that engagement in combat it would not be able to hit the target due to the effects of the environment. The principle is, "Train as you would fight."

In another example, a crew detects two targets and engages the less dangerous one before the more dangerous. If the crew overexposes itself to the more dangerous target while engaging the other one, it receives a "U" for the engagement. In combat the more dangerous of the two vehicles would have time to hit the Bradley while the Bradley crew was engaging the other one.

These two examples reflect significant changes from the scoring matrix and PCW philosophies. In the first of these examples, scoring matrices and PCW evaluation procedures would penalize a crew only 30 points for failing to wear protective masks, and a crew that achieved 100 points for an engagement time would pass the task with 70 points. In the second example, scoring matrices and PCW evaluation procedures would

RANGE (Meters)	TARGET CONDITIONS			
	NORMAL (seconds)	1 CONDITION (Seconds)	2 CONDITIONS (Seconds)	3 CONDITIONS (Seconds)
400	11	12	16	17
500	12	13	17	18
600	13	14	18	19
700	14	15	19	20
800	14	17	20	21
900	15	18	21	22
1000	16	19	22	24
1100	17	20	23	25
1200	18	21	24	26
1300	18	22	26	28
1400	19	23	27	29
1500	20	24	28	30
1600	21	25		

Figure 3. Sample of a BFV exposure timing matrix.

penalize a crew only 5 points for engaging the less dangerous target first; a crew that achieved 100 points for an engagement time would pass the task with 95 points. If the crew hit only one of the targets, it could still receive up to 45 points for the engagement.

Even with these improvements, there are some concerns about T-P-U evaluations. One of these is the lack of a numerical score to motivate crews to excel. This is a valid concern that will challenge commanders and their master gunners to

T-P-U represents a fundamental shift in gunnery philosophy toward a standard that is based on the threat's capability and includes the warfighting skills needed to perform gunnery tasks.

develop incentive programs to encourage crew performance. There are several ways to convert these evaluations to numerical scores, but doing this loses sight of the intent and focus of the evaluation philosophy.

It is certainly better for a crew to walk away from a gunnery after-action review thinking, "We missed one of two targets during an engagement; in combat, that

threat target would have hit us!" instead of, "We missed a target and lost 50 points, but we can make it up during tonight's run." Units can use numeric conversions as a tool for statistical summaries of battalion or squadron gunnery results for AARs to higher headquarters, but points really have little value outside of battalions or squadrons. The bottom line: In unit readiness reporting, the reportable item is the percentage of crews qualified.

Another concern is the use of T-P-U to assess individual crew proficiency. T-P-U is a commander's assessment tool—his personal assessment (opinion) of a unit's level of proficiency on given tasks. The use of T-P-U as an evaluation tool with stringent GO/NO-GO criteria is a move away from the subjectivity of T-P-U's original purpose; but this evaluation process is designed to evaluate individual crew performance, not overall unit proficiency.

Historically, the proficiency and skills of our noncommissioned officers have determined the results of individual Bradley crew performance, and commanders have used these results to determine their overall assessments of Bradley crew proficiency. Using T-P-U for crew evaluations has no effect on a commander's ability to use it as an assessment tool.

Establishing a GO/NO-GO, threat-based standard for all Bradley models is one of the most important advantages of

T-P-U evaluations. As we field the Bradley A2ODS vehicle with its laser rangefinder and automatic gun elevation correction, we will find that it outperforms its predecessors. And the Bradley A3, which will have a ballistic solution that applies automatic elevation and target lead, should outperform the A2ODS models.

Maintaining a standard based on the

threat capabilities and the crew's warfighting skills provides evaluation standards that are applicable to all Bradleys. It does not matter to the threat whether a crew is in a Bradley A0 or A3; his rounds are going to hit the Bradley in the same amount of time. Just as the vehicle has evolved, so have the methods of evaluating crew gunnery. With the publication of the new FM 23-1, we have

reached the gunnery goal of providing realistic threat-based training for the entire Bradley fleet.

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Direct Fire Planning

Platoon and Company Sector Sketch

CAPTAIN MATT S. LaCHANCE
CAPTAIN CHRISTOPHER S. HART
LIEUTENANT MATTHEW W. McFARLANE

After a rotation at the National Training Center (NTC), our unit returned home with the realization that our direct fire planning procedures were disorganized, time-consuming, and ineffective. It was apparent that good direct fire planning was an art that required study, practice, and visualization.

Additionally, we were introduced to a set of planning considerations (thanks to our observer-controllers) that we had not been using effectively—time-phasing the engagement area, for example. We needed some tools to help us use this newly acquired knowledge. Clearly, the old method of designating sectors and covering deadspace with indirect fire does not make the most effective use of the company team's capability, nor does it constitute a direct fire plan (DFP). Direct fire is the biggest asset a company commander controls. Engaging a numerically superior force and winning requires higher-level work in direct fire planning.

We identified our major deficiencies as follows:

- Visualization and verification of the

plan was lacking. Platoon sector sketches of varying sizes and quality prevented the commander from visualizing and finding weaknesses in the DFP.

- We lacked a standard format for translating what a rifleman or gunner can see and engage up through the chain of command.

- Because of the lack of standardization, disseminating refinements and changes was difficult.

- Although many of the tools of direct fire planning were being used, there was no plan that centralized the effort.

In preparing for our next rotation, and to capitalize on this learning experience, we set out to develop some tools to help soldiers and leaders with direct fire planning. The guidelines we used were as follows: The plan had to be simple, standardized, easy to use, and understood by all soldiers. We had to find a way to bridge the gap between the handwritten range card and an accurate, scaled DFP. Additionally, we wanted to make it easier to disseminate the plan up and down the chain of command. For this, we needed clear, scaled, accurate representations of

the platoon and company fire plan. Since no plan is ever static, the plan would also have to allow for the rapid dissemination of changes.

The cornerstone of our system is DA Form 5517-R, the standard range card. We placed two forms back-to-back, with an example derived from the appropriate manual—for example, Field Manual (FM) 7-7J, *The Mechanized Infantry Platoon and Squad (Bradley)*, page 6-9, for the BFV; FM 7-8, *The Infantry Rifle Platoon and Squad*, page 2-77, for dismounted positions—on one side and laminated it (Figure 1). Each BFV kept two copies in the turret, and each dismounted soldier carried a reduced version in his helmet. This ensured that each two-man fighting position had one copy and the other copy went to the appropriate leader. The range cards were added to our pre-combat inspection checklist.

The 1:50,000-scale platoon fire plan overlay (Figure 2) is the platoon leader's sector sketch. The company commander issues the upper left and lower right grids during the warning order to ensure that all platoon overlays will line up when he

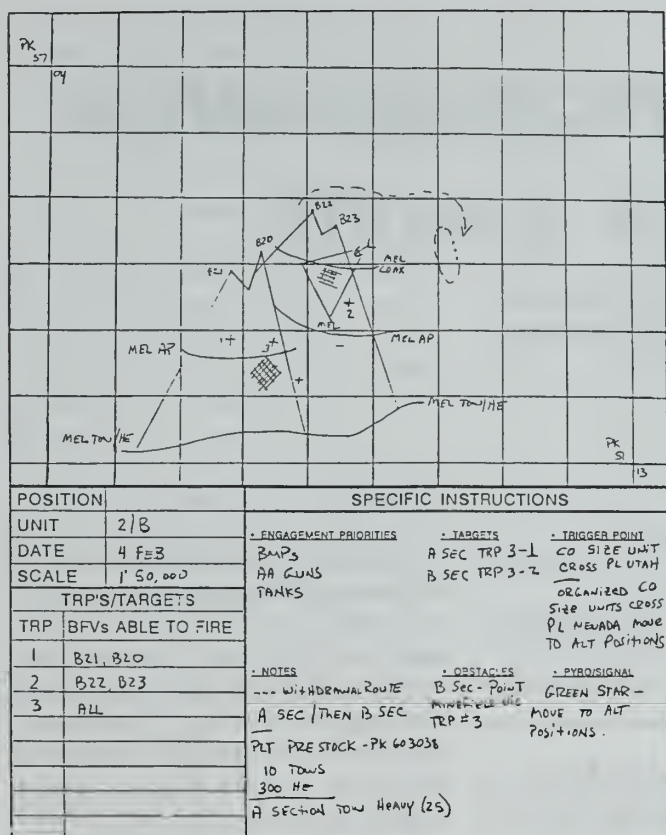


Figure 2. Platoon fire plan

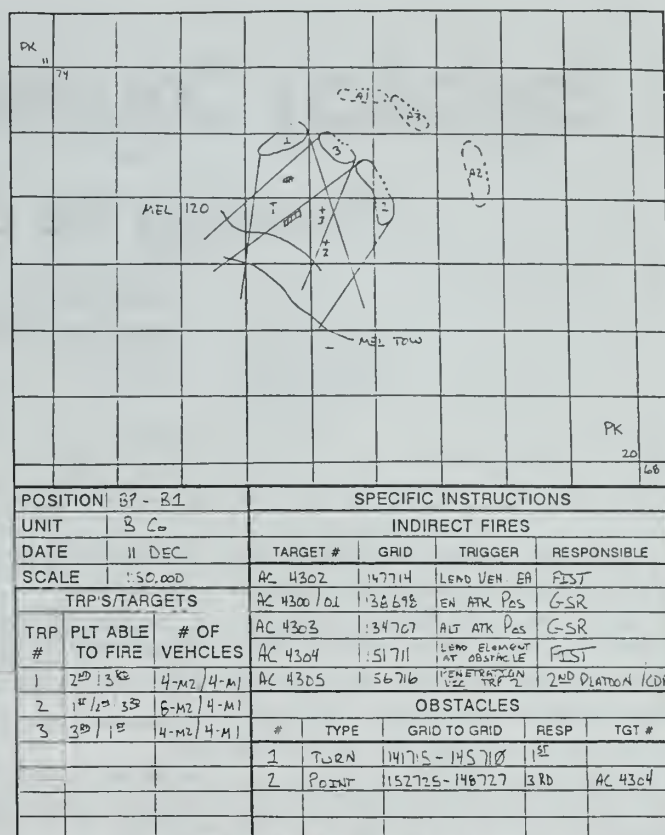


Figure 3. Company fire plan

Combined with proper fire planning techniques, this tool allows the platoon leader to develop his platoon fire plan. All essential combat information is recorded in the *Specific Instructions* section of the overlay. The platoon sector sketch, along with the company operational graphics, enables the platoon leader to plan his mission and brief his subordinate leaders accordingly. The plan briefed directly on the map and on the ground gives leaders a precise picture of the platoon's role in the DFP.

The company sector sketch is compiled by placing all platoon sector sketches directly on top of one another on the map. The commander can refine his plan and address his planning considerations. At this point, the indirect fire plan is validated in coordination with the company fire support officer (FSO). The commander can integrate and verify the engineer obstacle plan, and the indirect fire plan with the scheme of the operation. The FSO submits additional targets or target refinements through the TACFIRE system.

The commander can now produce his

company team fire plan quickly, providing the battalion commander with an accurate picture of his capabilities (Figure 3).

After solving problems in the plan, the commander can quickly get the company fire plan back to the platoon leaders. The leaders bring their copy of the DFP, overlay it with the commander's, and trace the company fire plan.

At the NTC, we found that this plan greatly helped soldiers understand and execute the platoon and company defense. This concept allowed the key leaders at squad and platoon level to see how their elements contributed to the overall scheme. In addition, it allowed the platoon leaders and the company commander to be more effective in briefing the DFP to their sub-unit leaders. This method used time more effectively and improved our mission accomplishment.

Although using these tools enabled us to make the most of the time available, they did not make a direct fire plan for us. A solid understanding of the principles of fire control and direct fire planning considerations was the basis for the brain

work. Using standardized fire plans to brief our soldiers enabled them to see the overall plan and the way each position contributed to the DFP. The platoon and company sector sketches help translate intentions into a visualized plan that everyone understands.

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Battalion Counterreconnaissance

“Flooding the Zone” at the NTC

CAPTAIN BRADLEY R. ROYLE
CAPTAIN RICHARD G. HOBSON

Successful counterreconnaissance operations greatly increase a unit's chances of succeeding in the defense at the National Training Center (NTC). This means the unit must deny the opposing force (OPFOR) knowledge of its preparations and dispositions until the OPFOR enters the engagement area. An enemy that locates a unit in the main battle area (MBA) can template the battalion, formulate a valid plan, and conduct a coordinated attack that allows him to mass on one company team, defeat it, and penetrate the battalion defense.

In the technique described here, a unit uses mass and deception to build an impenetrable wall or, in football terms, “flood the zone” to stop the OPFOR reconnaissance effort.

During normal defensive operations at the NTC, a battalion often covers a frontage of 12 kilometers or more. If the unit is to build an impenetrable security zone, it must cover every trail, valley, and hill in the battalion zone, and this requires mass. Asking one company team, even a reinforced one, to do this is simply too much, as has been demonstrated repeatedly at the NTC. In the “flood-the-zone” technique, a counterrecon force of three company teams—consisting of the supporting effort companies of the battalion defense—occupies the security zone while the main effort company team occupies a tactical assembly area to the rear of its intended battle position (Figure 1). This technique enables the heavy battalion to apply mass to keep the OPFOR from observing defensive preparations.

The flood-the-zone counterrecon-

naissance is conducted in five phases (see Figure 2):

Occupy the Counterreconnaissance Line. The battalion occupies the counterrecon line with a force consisting

A unit uses mass and deception to “flood the zone” to stop the OPFOR reconnaissance effort.

of three company teams and the battalion scout platoon.

The security zone is at least four kilometers deep, with the scouts positioned about three kilometers forward of the com-

pany teams. The security area must be well forward of the positions from which the battalion intends to defend. All distances should be based, however, on an analysis of METT-T (mission, enemy, terrain, troops, and time) and the unit's command and control capability. This occupation gives any OPFOR reconnaissance elements remaining in the zone a false picture of the battalion's dispositions. It also gives the battalion time to completely secure the MBA before moving to its final battle positions. In essence, the battalion positions itself well forward of its main defensive positions and pulls back to occupy them, instead of occupying assembly areas behind their battle positions and moving forward into them.

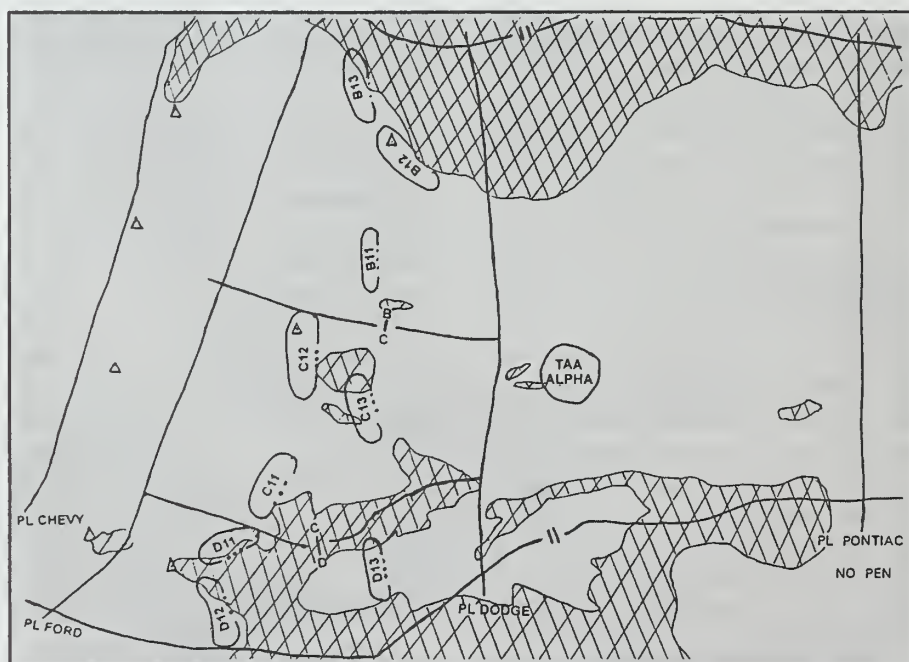


Figure 1

Secure the Area of Operations. The reconnaissance and security operation is directed at eliminating OPFOR stay-behind reconnaissance forces positioned in zone. This phase, which is executed primarily behind the counterrecon screen, consists of extensive patrolling and the occupation of terrain that provides the best OPFOR observation of the MBA (Figure 3). The battalion S-2 plans named areas of interest (NAIs), which are cleared by units actually passing through them. The operation is controlled by the battalion tactical operations center (TOC).

One technique for maintaining positive control of the operation is to have an S-2 or S-3 representative stand at the site of the main effort with a map and radio to see for himself that each NAI is cleared. He can also identify key observation points that were missed during the initial map reconnaissance and then direct pa-

An artillery battery may have to deploy forward in zone to execute this and other indirect fire requirements forward of the counterrecon screen.

trols to clear them. Battalions with airlift support can improve the effectiveness and speed of the clearing operation by using a platoon of dismounted soldiers and a UH-60 helicopter to clear and control dominant terrain in the area of operation.

The main effort's fire support team (FIST), in addition to preparing the engagement area, is used to execute harassing and interdiction fires on suspected OPFOR observation posts (OPs). An artillery battery may have to deploy forward in zone to execute this and other indirect fire requirements forward of the counterrecon screen.

One of the keys to the flood-the-zone technique is the actual occupation of the best OPs in the MBA. Occupying key points with friendly dismounted soldiers keeps the OPFOR from using them. This also places friendly elements in a position to observe other possible OPFOR OPs and identify OPFOR infiltrations, which can then be destroyed by artillery or mortar fires. This can easily be done with three to five dismounted infantry

H-42				
H-24				
H-12				
H-06				
H-HOUR				
EXECUTION MATRIX	PHASE 1 OCCUPY	PHASE 2 CLEAR	PHASE 3 MAINTAIN	PHASE 4 COLLAPSE
A CO	H-40 18G INATES MVT H-38 XO RECONS TAA H-37 OCCUPY TAA ALPHA NLT H-38 ALL PRIMARY POSITIONS STAKED	NLT H-30 CLEAR NAI 8		
B CO	H-40 XO RECONS CR POSITION H-38 XO POSITIONS VEHICLES H-37 ALL VEH POS IN SP STAKED NLT H-38 OCCUPY SPs B11, B12, B13	NLT H-38 8 CLEAR NAI 8 NLT H-30 OCCUPY OP B1 NLT H-23 CLEAR NAI 3 NLT H-18 CLEAR NAI 2 NLT H-18 CLEAR NAI 4	H-23 1 PLT TO SP H-18 2 PLT TO SP H-18 3 PLT TO SP	H-3 1 PLT BEGINS MVT TO SP H-2 2 PLT BEGINS MVT TO SP H-1 3 PLT BEGINS MVT TO SP
C CO	H-40 XO RECONS CR POSITION H-38 XO POSITIONS VEHICLES H-37 ALL VEH POS IN SP STAKED NLT H-38 OCCUPY SPs C11, C12, C13	NLT H-38 8 CLEAR NAI 7 NLT H-30 OCCUPY OP C1 NLT H-23 CLEAR NAI 8 NLT H-18 CLEAR NAI 9	H-23 1 PLT TO RESERVE POS REHEARSE MVT TO ABF 1-2 H-18 2 PLT TO RESERVE POS REHEARSE MVT TO ABF 2-4 H-18 2 PLT TO RESERVE POS REHEARSE MVT TO ABF 5-8	H-3 1 PLT BEGINS MVT TO SP H-2 2 PLT BEGINS MVT TO SP H-1 3 PLT BEGINS MVT TO SP
D CO	H-40 XO RECONS CR POSITION H-38 XO POSITIONS VEHICLES H-37 ALL VEH POS IN SP STAKED NLT H-38 OCCUPY SPs D11, D12, D13	NLT H-38 8 CLEAR NAI 10 NLT H-30 OCCUPY OP D1 NLT H-23 CLEAR NAI 11 NLT H-18 CLEAR NAI 12 NLT H-23 ALL VEHICLE POS IN SP STAKED	H-23 1 PLT TO SP H-18 2 PLT TO SP H-18 3 PLT TO SP	H-3 1 PLT BEGINS MVT TO SP H-2 2 PLT BEGINS MVT TO SP H-1 3 PLT BEGINS MVT TO SP
ENG	H-38 DOZERS DIG IN MORTARS/ADA H-37 DOZERS READY TO DIG IN MAIN EFFORT (A Co)	H-27 DOZER HANDOFF TO B Co	H-18 DOZER HAND OFF TO D Co	
BN	H-43 8 ISSUE INITIAL WARNING H-41 8 TOC ISSUES MVT ORDER H-22 8N ISSUES OUTLETC WARNING H-38 8N RAR H-38 CONDUCT MEET FOR SA DEVELOPMENT	H-28 8N ISSUES OPORDER H-24 BACKBRIEF	H-18 8N REHEARSAL	

Figure 2

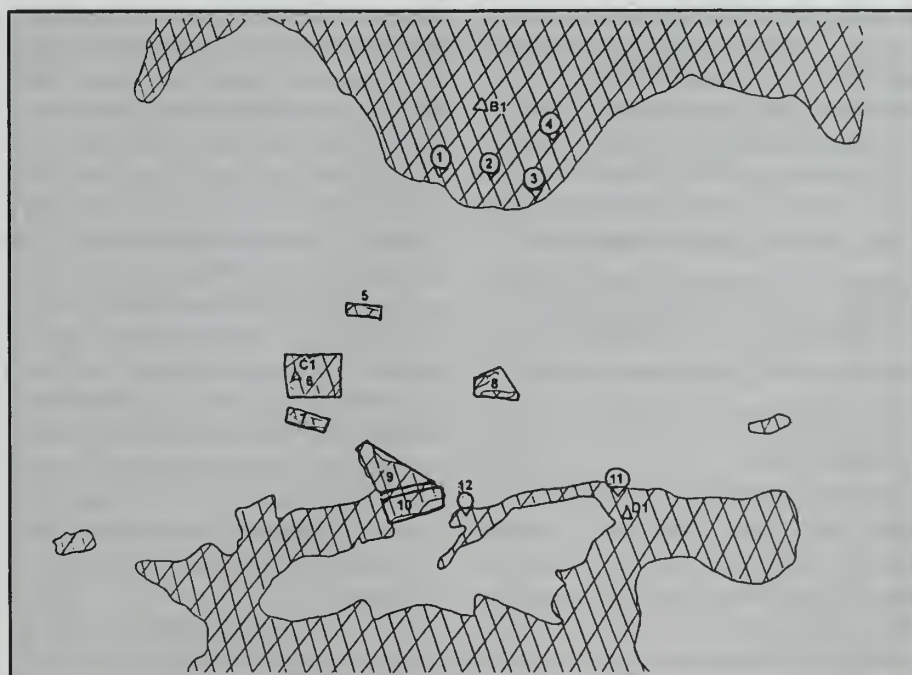


Figure 3

squads. During the actual conduct of the defense, these squads can remain in position—acting as OPs, providing additional information on the OPFOR, and calling assigned indirect fire targets—or they can act as antitank hunter-killer teams that move as necessary to influence the battle. Additionally, since the major focus of OPFOR artillery is on the mechanized infantry and armor battle positions, these

dismounted soldiers stand an excellent chance of surviving OPFOR artillery attacks.

Maintain the Counterreconnaissance Screen. With three companies forward on the screen line, complete security is established across the battalion front from one terrain feature to another. This allows two companies to concentrate on controlling the high ground on both

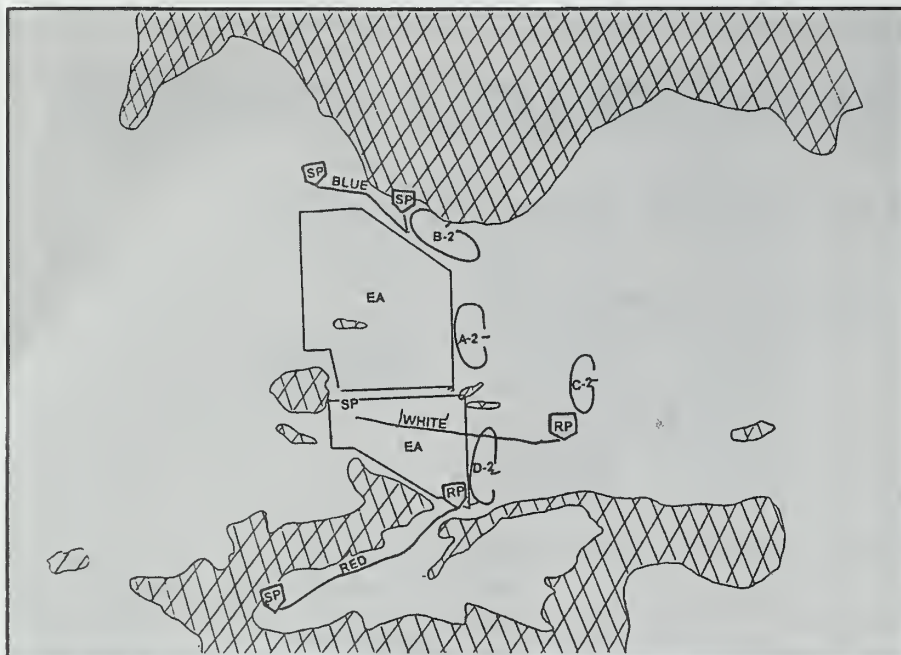


Figure 4

flanks while a third company focuses on the valley floor. With companies now occupying smaller frontages, they can realistically prevent the penetration of the security zone, develop real depth in the zone, and actually execute a rest plan.

The company FISTs should be posi-

Engineering operations take place behind the main body of the battalion, providing a secure area for the engineers and any other defensive preparations.

tioned to make maximum use of Copperhead munitions, which should be the weapon of choice of companies on the screen line. This is especially true for destroying the regimental reconnaissance force, which often has tanks. Initially, the OPFOR reconnaissance elements will try to infiltrate the security zone. If this effort is not successful, they will try to find the weakest point in the screen, create a penetration with tanks, and then push through as many reconnaissance elements as possible. This usually occurs around 2300 on the night before the attack.

While the companies in the supporting effort are forward in the counterrecon screen, they must also prepare their battle

and reserve positions in the MBA. Because the OPFOR habitually tries to infiltrate during hours of darkness—and because it is easier to maintain security with fewer vehicles during daylight with planning and coordination—the companies should still be able to complete their defensive preparations in the MBA (Figure 4). Of course, the main-effort company remains in the MBA and initially receives the priority for engineer assets. This gives the other companies time to conduct leader reconnaissance, develop engagement areas, and site and mark individual vehicle fighting positions. Once engineer assets are available, the executive officer and a few key personnel can secure the engineers, proof individual vehicle fighting positions, and prepare the defense.

It is worth noting that engineering operations take place behind the main body of the battalion, providing a secure area for the engineers and any other defensive preparations. Also, each platoon is rotated to the company battle position as a rehearsal of its move from the counterrecon line to the position and to site or stake vehicles and complete other defensive preparations.

Transition to the Defense. At about 0300 on the anticipated day of the attack, the counterrecon force begins to thin the counterrecon screen. Initially, the main

effort platoons of each company move along marked and rehearsed routes to their respective battle or reserve positions and are met by guides and placed in their fighting positions. The other platoons follow the same procedure, on order. The battalion TOC plans and controls the movement of each platoon to eliminate any chance of fratricide and to make sure all units are in position before dawn. The companies are responsible for seeing that no OPFOR recon elements mingle with their vehicles and follow them into their battle positions.

As the companies pull back into their battle positions, the scouts move to OPs from which they can cover the main OPFOR avenues of approach if needed. Company FISTs must move with one of the platoons to prevent fratricide and maintain adequate security. At the end of this phase, the battalion is prepared to defend its zone while forcing the OPFOR to fight blind.

The flood-the-zone technique provides a framework for the successful combination of mass and tactical deception. When combined with a good METT-T analysis, this technique confronts the OPFOR with an aggressive counterrecon force to deny the force an accurate template from which to plan its attack. Winning the counterrecon battle ensures that the OPFOR will not be able to mass its efforts. Thus, the unit is in a position to control the situation and destroy the OPFOR when and where it decides.

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Captain Richard G. Hobson is also a company trainer in the Resident Training Detachment, 2d Battalion, 156th Infantry. He previously led a mechanized infantry platoon and a scout platoon and commanded a company. He is a 1986 graduate of North Georgia College and was commissioned through the Officer Candidate School at Fort Benning in 1987.

Battle Drill Training Ladder

LIEUTENANT JOHN D. McDONALD

Leaders at every level of command struggle with ways to plan, execute, and evaluate training within the allocated time and resources. We all want to give our soldiers the meaningful, realistic training that will prepare them for combat. But we often try to execute too many tasks instead of focusing on the few that will enable our soldiers to survive the rigorous demands of battle.

With these considerations in mind, I developed a six-step training ladder that gives leaders an opportunity to train, evaluate, and retrain soldiers on any of the battle drills described in ARTEP 7-8 Drill, *Battle Drills for the Infantry Rifle Platoon and Squad*, and Field Manual (FM) 7-8, *Infantry Rifle Platoon and Squad*. In creating the ladder, I used the basic concepts in the drill manual while adding a few steps that give leaders the evaluation checkpoints they need to determine task proficiency.

The six steps on the ladder, as shown in Figure 1, are the following:

Leader Training. Leader training is the basis for ensuring that soldiers get training that conforms to the standards U.S. Army doctrine demands. During the training management process, senior leaders at company level identify the tasks to be trained during the training cycle. Platoon leaders then identify instructors for these tasks. Normally, this is managed at squad level, with squad leaders being tasked to train their squads on the specific tasks. Typically, a squad leader should be informed about eight weeks before the time he is expected to train his squad. This will give him time to obtain the resources and prepare a training lesson plan for the tasks to be taught.

Approximately two weeks before the training date, the platoon leader and platoon sergeant examine and validate the

squad leader's lesson plans. This establishes his ability to teach his squad the basics of the battle drill and move into the *crawl* phase. At the platoon level, platoon leaders must have their training plans validated by the company commanders, and on up through the chain of command.

Leaders must also ensure that the following criteria are met before training:

- Training should be linked to the unit's critical wartime missions.
- The battle drills selected should apply to specific tasks on the mission essential task list (METL) and follow the commander's training guidance.
- Battle drills should be ranked according to the unit's current proficiency on them—trained, practiced, unpracticed (TPU)—and the degree of difficulty.
- Leader and individual tasks that support the battle drills have been identified.
- Leader and individual training have been conducted.
- Conditions for training have been resourced, planned, and set up.

Crawl Phase. No matter which task is to be trained, leaders must begin their training at the *crawl* phase, which essentially emphasizes teaching the basics of the task to be trained. It is the most important step in the battle drill training lad-

der because it outlines the basic standards of performance and gives each soldier the baseline knowledge he needs to execute his own individual tasks. This step can be performed in rear areas before movement to a training area, or as soon as the unit arrives at the field training area.

The trainer begins by talking the soldiers through the drill step-by-step, describing what each individual or team must do. The following are key training points that need to be emphasized:

- General description of the drill, its purpose, and its importance.
- Description of the initiating cue, command, or combat context in which the training occurs. (The cue can be as simple as a verbal command or a grenade simulator.)
- Description of the standards of performance.
- Detailed description of the performance measures for each step of the drill.
- A step-by-step demonstration of the drill subtasks.
- Roles of the supporting individual tasks within the drill.
- Answers to any questions pertaining to the drill.

By following these ARTEP 7-8 drill, crawl phase, steps, the leader lays the

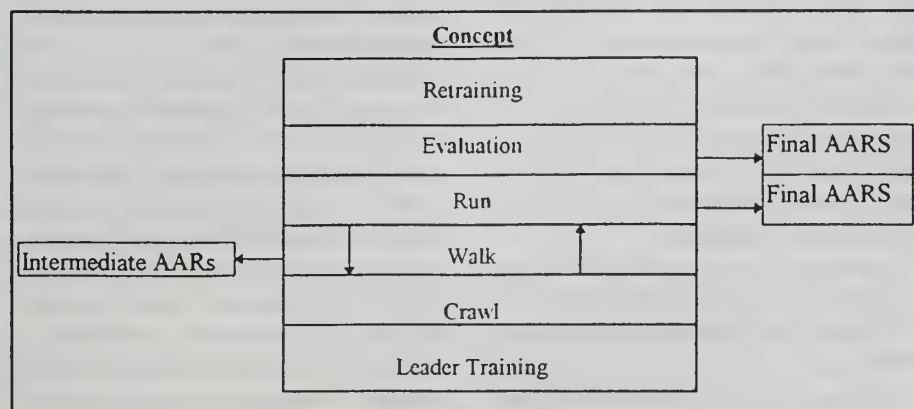


Figure 1. The Battle Drill Training Ladder

TRAINING NOTES

foundation for the battle drill and moves up to the next step of the ladder.

Walk Phase. In the *walk* phase, the soldiers are given an opportunity to practice the drill they have been taught at a speed that gives them a feel for the drill and allows them to ask questions. ARTEP 7-8 Drill describes the *walk* phase as one in which the unit executes the drill at a slow, step-by-step pace. Leaders focus on placing soldiers in their individual supporting roles and walking through the drill in exact detail.

Leaders perform the following during this phase:

- Produce the cue that will initiate the drill.
- Have the soldier perform, at a slow pace, each individual and unit task the drill requires.
- Coach the soldier through each repetition of the drill, and critique his performance throughout.
- Stop training at any point to make corrections, and then continue the training.
- Continue the training until the drill is performed to standard.

The most important thing for the squad leader to do throughout the training at this point is conduct an intermediate after-action review (AAR). Whenever a drill is not being performed to standard, the leader must stop the training and give a brief AAR on what is wrong with that step of the drill and what needs to be done to correct the problem. At this point, the soldiers will know what is wrong and can re-execute that portion of the drill. Once the drill has been performed to standard, the leader makes a decision whether to retrain or move on up the ladder.

Run Phase. The next step for the battle drill leader is to put it all together into the *run* phase. At this point, the leader has identified any prior problems and allows his unit to perform the drill at full speed as if in combat. This step is of paramount importance because it is here that the leader determines whether his unit is proficient at the drill or must back down the ladder to the *walk* phase.

To manage the *run* phase, the leader must perform the following tasks:

- Initiate the cue to begin the battle drill.
- Allow the drill to be executed completely without any interruptions.

Days 1-3	Day 4	Day 5
<u>Task 1 Crawl--Walk--Run</u>		
<u>Task 2 Crawl--Walk--Run</u>	<u>Evaluation</u>	<u>Retraining</u>
<u>Task ?? Crawl--Walk--Run</u>		

Figure 2. Five-Day Sample Training Plan

- Force the unit to repeat the drill if any subtasks are not performed to standard.
- Revert to the walk phase if tasks cannot be performed correctly.
- Vary the conditions under which the drill is performed to test the unit's ability to adapt to the changing nature of the battlefield and to bring the unit to higher levels of competency.
- Incorporate an opposing force (OPFOR) or MILES (multiple integrated laser engagement system) equipment to gain a more realistic indication of unit competence.
- Conduct a final AAR after each iteration to summarize the results of the training. This AAR should focus on training strengths and weaknesses, obtaining feedback, and emphasizing key training points.

Once this phase has been completed, the leader has three options: He can have the unit run through the baseline battle drill again until it is executed to standard and the unit is thoroughly trained. He can have the unit perform the battle drill again under different conditions. Or—if a multiechelon STX (situational training exercise) lane or a multiechelon live-fire is desired for the *evaluation* step—the leader can begin again at the *crawl* phase with a new battle drill and execute training until all the battle drills have been trained. Then the unit can move on to the evaluation phase.

Evaluation. Various options are open to the leader for this phase. The unit must determine whether an STX, a live fire, or a MILES force-on force is the desired method of evaluation. Regardless of the format, the evaluation step will give the unit leaders an honest assessment of the soldiers' comprehension and execution of the tasks trained in the four previous steps.

Normally, an STX, with a MILES force-on force scenario, will give the leaders the best opportunity to evaluate the unit. One

reason is that this type of evaluation allows the evaluator to judge how the unit reacts to the combat environment. This method will also test the unit leader's ability to make decisions under pressure. Finally, MILES gives the evaluator a chance to see how effectively the unit engages and destroys a live OPFOR. At the end of the training, the evaluator can also elicit comments from the OPFOR during the AAR that will improve the unit's ability to conduct the battle drill.

A live-fire evaluation allows the leader to take the training to a higher level in which the individual soldier can fire and maneuver while executing the assigned task. Benefits include practicing rifle marksmanship in a semi-realistic environment and seeing the destructive effects our weapons can have on the enemy. Finally, the live-fire exercise gives the soldiers confidence that the battle drill can be executed safely with devastating effects against an adversary.

These evaluations are important for soldiers and leaders because they provide both positive and negative feedback on how well the unit performs the drill under conditions as close to combat as allowed. Through the final AAR, comments are provided that establish the framework for the final step of the ladder.

Retraining. Once the AAR comments have been discussed, the leader can establish a retraining plan. Normally, the focus is on certain battle drill subtasks that were not performed correctly during the evaluation. A paper copy of the AAR should be kept for future reference. It is the leader's responsibility to make an honest assessment and then conduct any necessary retraining. Retraining ties all the training together and completes what should have been a strenuous and demanding training event. Retraining also provides a basis for the next training event

on the calendar and allows leaders to plan training that builds upon that just conducted.

This plan gives junior leaders an opportunity to train their soldiers and allows senior leaders to evaluate the tasks that are trained. Retraining is conducted at the end so that tasks not performed to standard can be reworked. The plan itself can

be modified to fit the time constraints, but a five-day training cycle generally works best (Figure 2).

The battle drill training ladder can be an effective method of executing the drills that make up the bread and butter of the infantry. It provides a common-sense approach to battle drill training and also gives our soldiers the performance-

oriented training they need to survive on the battlefields of the future.

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The “B” Deployment Bag

MAJOR DOMINIC J. CARACCILO

Several U.S. military operations in recent years have had one thing in common: Their lead units were mustered for no-notice deployments that turned out to be much longer than expected. While most of these initial units were thoroughly prepared for the immediate mission, their preparedness for an extensive stay was somewhat questionable.

For instance, on 6 August 1990, the 325th Infantry, 82d Airborne Division, marshaled for a no-notice deployment as the lead element into Saudi Arabia for Operation DESERT SHIELD. In 14 hours, the first element of the task force was on its way and didn't return to Fort Bragg for eight months. Five of those months were spent waiting and preparing for combat, while the remaining months were spent on the war itself and the redeployment activities.

Units leaving for Saudi Arabia that were given notification and time to prepare for the deployment packed such items as training aids including MILES equipment, Dragon trainers, and M16 range-firing necessities; maintenance tents; and personal items such as physical training (PT) gear, additional toiletries, cots, small battery-powered radios, and reading material.

During a two-week mission cycle in

the 82d, it is SOP (standing operating procedure) for paratroopers in each unit to maintain ALICE packs and A-Bags containing the things they will need in case of a combat deployment. An ALICE pack contains the essentials—three days of rations, water, and ammunition. The A-Bags are packed, inspected, placed in a standard unit location, and deployed with the soldiers. A-Bags are packed with

The B-Bag would include items the commander considered essential to training and morale for an extended period.

items needed to sustain the soldier for a few weeks after the initial action; they are not intended to support the soldiers for an indefinite period.

A typical A-Bag contains additional battle dress uniforms, T-shirts, underwear, socks, wet-weather gear, sleeping bags, NBC (nuclear, biological, chemical) gear, shelter halves, tent pegs, additional MREs (meals, ready to eat) to round out the basic load, and other items deemed essential to the mission and the days to follow. By SOP, these bags are

loaded as ballast on trucks, HMMWVs (high-mobility, multipurpose wheeled vehicles) and pallets and are deployed with the soldiers.

But soldiers who are deployed for an unexpected longer period also need physical training gear, sweat suits, running shoes, swimming suits, extra toiletries, entertainment equipment, and other personal items.

Once the 325th Infantry arrived in Saudi Arabia and the long wait for combat began, leaders had to take the necessary actions to sustain the soldiers. The following are among the steps taken to ensure that the soldiers could train and maintain morale:

- Each soldier was given advanced pay (\$23.00) to buy running shoes for PT, and an urgent request for running shorts was made for the entire task force.
- Equipment for training was collected at home base, loaded in express containers (CONEXs) and sent to theater by boat. This was an ongoing activity for the first five months.
- Many items were ordered for training, including E-type silhouettes, VS-17 panels, blank adapters, and a large assortment of batteries.
- The family group at Fort Bragg col-

lected personal items for the soldiers and sent them by courier or mail.

- The local oil company in Saudi Arabia provided books, televisions, and even VCRs for each battalion to help sustain the morale.

While many of these activities were helpful to the commander in accomplishing the mission, there were still some difficulties. Problems arose in trying to get equipment sent from home base. Items

The idea behind this B-Bag is to keep it packed during mission cycles, inspect its contents, and manifest it as part of the follow-on contingent.

were misplaced, resulting in accountability problems. Often, the wrong items were sent and, if they happened to be part of a system, they were incomplete, with no trail of custody for missing subsystems. Another difficulty was that some soldiers had nobody back home to send them the essentials.

A way to solve many of these problems is to implement a "B" deployment bag policy—a contingency plan for a possible long-term deployment. The B-Bag would include items the commander considered essential to training and morale for an extended period.

Many items that might be included in the B-Bag are additional uniforms (possibly a few sets of battle dress uniforms and a set or two of the appropriate camouflage fatigues), underwear, field jackets, wet and cold weather gear, personal items—pens and stationery, stamped envelopes, PT gear, cigarettes, chewing tobacco—and other Class VI items the commander may authorize.

The idea behind this B-Bag is to keep it packed during mission cycles, inspect its contents, and manifest it as part of the follow-on contingent. The unit commanders might also want to pack (or simply locate) essential training items to be shipped upon request as part of unit B-Bags. By preparing the unit and its soldiers in this manner, the chain of command would be able to focus on warfighting issues even if it should be deployed for an unknown period of time.

Another recurring problem units have after deployment is the soldiers' inability to pay their bills. One way to resolve this, and a part of the B-Bag policy, would be to maintain a roster for each soldier containing his landlord's address, his credit card account numbers, and possibly the addresses of the major institutions he may owe. The first sergeant could keep this information in the company safe on pre-addressed stamped envelopes with blank personal checks the soldiers could use in case of deployment. (There

might be some specific legal ramifications to be explored before implementing such a policy.)

Maintaining additional equipment on mission cycle would not be an easy task, and it wouldn't be popular in the unit. But the difficulties of maintaining it would be minimal compared to those that could arise once a soldier deployed and found himself unprepared to keep up with the world back home. Moreover, a com-

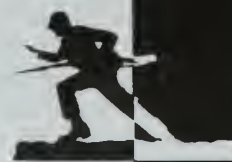
Unit commanders might also want to pack (or simply locate) essential training items to be shipped upon request as part of unit B-Bags.

mander could better prepare his unit for the task at hand if he designated the items that would be needed for training in case of an extended deployment.

Major Dominic J. Caraccilo served in the 1st Battalion, 325th Infantry, at Fort Bragg during several deployments. He is the author of the book *The Ready Brigade of the 82d Airborne in DESERT STORM* (published by McFarland & Co., 1993) and numerous articles, including "The Battle of Buna," in *INFANTRY*'s May-June 1993 issue. He is now assigned to the Department of Systems Engineering, United States Military Academy.



BOOK REVIEWS



Over the past few months, *INFANTRY* has received several reference works that should be both interesting and useful:

Medal of Honor Recipients 1863-1994. Compiled by George Lang, Raymond L. Collins, and Gerard White. Facts on File, 1995. Two volumes, 896 Pages. \$99.00, Hardcover. Published in honor of the 50th Anniversary of the end of World War II, this two-volume work is organized chronologically by war, conflict, or campaign, and lists the name of each Medal of Honor recipient along with his rank and organization, place and date of birth, the date he entered the service, and the complete award citation.

These citations were originally published in a softbound edition that has been out of print for many years. In these volumes, that edition is updated to include the two recipients from Operation RESTORE HOPE in Somalia and printed in handsomely designed hardcover volumes.

Great Battles and Leaders of the Second World War. By Winston S. Churchill. Introduction by John Keegan. Edited by Giordano Bruno Guerri. Houghton Mifflin, 1995. 328 Pages. \$40.00. This volume gathers selections from Churchill's epic six-volume history, *The Second World War*. It covers battles and leaders in roughly equal proportions, contains 465 photographs and 24 maps, and provides behind-the-scenes details as only Churchill could have related them.

The Cambridge Illustrated History of Warfare: The Triumph of the West. Edited by Geoffrey Parker. Printed in Great Britain by Cambridge University Press, 1995. 408 Pages. \$39.95, Hardcover. Editor Geoffrey Parker is Professor of Military and Naval History at Yale University. As he says in his preface, "This volume follows the format of other Cambridge Illustrated Histories in that pictures and text both seek to tell the

same story in parallel." It is highly readable and contains numerous black and white and color photographs and maps.

Handbook on German Military Forces. U.S. War Department. Introduction by Stephen E. Ambrose. Louisiana State University Press, 1995. 635 Pages. \$29.95. This handbook was one of a series of studies of foreign military forces prepared during World War II, designated War Department Technical Manual (TM-E) 30-451, (1945). At the end of the war, a few copies were placed in military library collections and the rest discarded. The manual was originally printed in loose-leaf format with each chapter standing alone, so that additional material could be added. A publisher's note states, "The volume has been officially released from restricted status by the U.S. Army Center for Military History."

Handbook on Japanese Military Forces. U.S. War Department. Introduction by David Isby, and Afterword by Jeffrey Ethell. Originally published by Greenhill Books/Lionel Leventhal, Ltd., in 1991. Louisiana State University Press, 1995. 403 Pages. \$24.95. This handbook was printed as War Department Technical Manual (TM-E) 30-480 in 1941 and distributed to U.S. Army officers in the Pacific Theater. Throughout the war, additional information was included as it became available. Since that time, it has become the best single reference source on the wartime Japanese military available in English.

Japan's Secret War. By Robert K. Wilcox. Marlowe and Company, 1995. 268 Pages. \$12.95, Softbound. Reviewed by Lieutenant Colonel Albert N. Garland, U.S. Army, Retired.

This is the same book first published in 1985, except for a 27-page epilogue and a list of sources for the material in

the epilogue. It is the story of Japan's World War II efforts to develop an atomic bomb, or *genzai bakudan* in Japanese.

Using primary and secondary sources, plus interviews with both Japanese and U.S. scientists, Robert Wilcox, a journalist and novelist, weaves a most interesting and easy to read story. He describes the work of such well-known Japanese scientists as Yoshio Nishina, Japan's foremost physicist at the time; Bunsaku Arkatsu, a former pupil of Albert Einstein; and Tsunesaburo Asada, then head of Osaka University's physics department. Many more Japanese scientists are identified in the book as having worked on the atom bomb project.

The fact that Japan was trying to develop an atom bomb during the war is no secret, but Wilcox attempts to answer four specific questions in his book: How far had the Japanese effort progressed before the end of the war? Did Japan actually perfect and test an atomic bomb on 12 August 1945, as was reported in an Atlanta newspaper in 1946? Did they know about our Manhattan Project? And, finally, why did our government appear so reluctant to release information about the Japanese project in the years after the war?

In preparation for the reissue of his book, Wilcox hoped to find new sources of information, items that may have been downgraded in classification since his early research efforts. He did find a few items that corroborated parts of the earlier work, and this is the material in the epilogue to this book.

Wilcox concludes that while "there is not enough evidence yet to believe the Japanese made an atomic bomb" before the end of the war, they "went a lot farther in their program than those in the know, if they are still alive, have told the outside world." He also believes the Japanese "are not solely the victims of the bomb, as they have been portrayed for so

long. They were willing participants in its use, and only losers in the race to perfect it."

In developing his thesis concerning what the Japanese knew about the Manhattan Project, Wilcox tells of the "TO" spy network in the United States, which was headed by a Spanish citizen, Angel Alcazar de Velasco—a former bullfighter and adventurer who hated the U.S., who had been trained in Germany, and who had worked as a spy for Germany in London. Wilcox believes this network did develop some information about the Manhattan Project and pass the information to Japan, for whom it was working at the time.

Finally, Wilcox believes the U.S. government deliberately covered up Japan's atomic research efforts during World War II just as it had collaborated in keeping secret for many years Japan's biological warfare research efforts during the war years. He attributes the beginnings of these efforts to General Douglas MacArthur. He says MacArthur was concerned with forging "a workable governing system in Japan while at the same time [lifting] his defeated subjects out of the postwar mire and into a bulwark against communism," and that "he tried hard not to needlessly antagonize them."

I recommend this book most highly. It certainly sheds new light on the realities of the world as they were in 1945, realities that resulted in our use of the first atomic bomb.

***A Dark and Bloody Ground: The Huertgen Forest and the Roer River Dams, 1944-1945.* By Edward G. Miller. Texas A&M Press, 1995. 250 Pages. \$33.85.** Reviewed by Colonel Cole C. Kingseed, U.S. Army.

The battles in the Huertgen Forest and the Roer River dams were some of the most hard-fought of World War II. In the words of one veteran, the infantry combat was nothing less than "pure, unadulterated hell." According to the author of this book, Edward G. Miller, the struggle was also characterized by inept operational planning by the leaders of the First U.S. Army and its corps, mental exhaustion throughout the ranks, and poor

communication and logistical services.

In what is sure to be a controversial analysis of the campaign in late 1944 and early 1945, Miller contends that the failure of American leaders to target the dams was "inexcusable." In researching his topic, the author—himself an active duty Army ordnance officer—draws upon operational and unit reports, combat interviews, official records, and a host of additional primary sources. He freely admits that this book is a result of his desire to produce as complete an account as possible of the activities at company, battalion, and regiment levels.

In September 1944 elements of Lieutenant General Courtney H. Hodges' First Army entered the Huertgen Forest on its way to secure crossing sites on the Rhine. To reach the Rhine, however, the Americans had to cross the Roer River and the forest was blocking access to it. What had begun as a continuation of the pursuit across France, however, quickly became a battle of attrition in terrain that favored the German defenders.

Nothing had prepared the American soldiers for the type of forest fighting they experienced. Tactical problems were complicated when commanders and staff members failed to recognize that the significant operational objectives were not the road junctions and towns but the Roer River dams that controlled the routes to the Rhine. Miller alleges that the tragedy of the ensuing battles was the Americans' insistence on trading their tactical advantages in firepower and mobility for the wrong objectives.

It was two months into the battle before senior American commanders—chiefly Hodges and VII Corps commander J. Lawton Collins—directed the capture of the dams. By then, division after division of U.S. soldiers had entered a deadly battle of attrition, and casualties were appalling. Not until February 1945 was First Army able to secure the dams and with confidence put troops on the east bank of the Roer.

Miller's analysis of the campaign will not sit well with the veterans of the Huertgen battles. His criticism of senior commanders echoes that of historian Russell Weigley who has charged Eisenhower, Bradley, and Hodges with "a pattern of uninquisitive headquarters plan-

ning." Still, the reader should try not to be overly critical of the decisions made in the heady days of 1944. Hindsight has its inherent advantages, but it generally fails to take into account the pressures of battle and the physical and emotional strain of the operational commanders.

In the final analysis, Miller leaves little doubt that he considers the Huertgen battles an American failure and a German success. Miller states that, if there is a lesson for future leaders, it is the need to identify the critical objectives and to focus energy toward gaining them; the destruction of the enemy force should always receive greater emphasis than the seizure of terrain. Perhaps. But a more valuable lesson is still the requirement to train soldiers to perform effectively in all types of terrain and under a variety of circumstances.

***Osage General: Major General Clarence L. Tinker.* By James L. Crowder, Jr. Oklahoma City Air Logistics Center, 1987. 394 Pages.** Reviewed by Dr. Ralph W. Widener, Jr., Dallas, Texas.

James L. Crowder, Jr.—Chief, Office of History, Oklahoma City Air Logistics Center, Tinker Air Force Base, Oklahoma—has written a compelling biography of the man for whom the base was named.

Clarence L. Tinker, one-eighth Osage Indian, was born in 1887 north of Pawhuska in the Osage Nation, 20 years before Oklahoma became a state. He attended the Osage Boarding School in Pawhuska, where he quickly distinguished himself by his personal bearing and his membership in the school's crack drill squad. In the Fall of 1906 he entered Wentworth Military Academy in Missouri and graduated 19th in a class of 34. His first assignment was to the Philippine Constabulary to help maintain law and order in that nation.

In 1912, he accepted a commission as a second lieutenant in the Regular Army of the United States and reported to Fort Leavenworth, Kansas, for a three-month "course of preliminary instruction" at the Infantry Center. He then joined the 25th Infantry—one of the black regiments re-

maining from those established by Congress in 1866—at Fort George Wright at Spokane, Washington; shortly thereafter, the 25th was transferred to the Hawaiian Islands, and Schofield Barracks was home for the next four years. At the end of that time, he received orders that would remove him from Hawaii for 25 years.

Although Tinker hoped for orders to a unit engaged in the war in Europe, it never happened. Because of his stellar performance as an infantry officer, he was promoted to the rank of captain in May 1917. Almost a year later, he was promoted to major and ordered to Camp Travis, Texas (a part of what is now Fort Sam Houston at San Antonio).

Various other assignments followed, but in the fall of 1920, he was detailed to the young Air Service (which had been formally made a combat arm of the U.S. Army in June of that year), completed flight schooling in California, and then reported to Fort Sill for the course of instruction at the Air Service Observation School. In January 1922, he was assigned to the 16th Observation Squadron at Fort Riley, Kansas, to work with the cavalry.

After graduating from the Army's Command and Staff School at Fort Leavenworth in 1926, he served as a military attache in the U.S. embassy in London; as assistant commandant of the Air Corps Flying School at Kelly Field, Texas; and as commander of the new MacDill Air Base at Tampa, Florida. He received his first star in October 1940.

General Tinker was playing golf on the MacDill course when he was notified that the Japanese had bombed Pearl Harbor. Among those relieved of command as a result was Major General Frederick L. Martin, commander of the Army Air Corps there. Tinker was assigned to replace him on 14 January 1942 and gained his second star.

When intelligence cryptographers intercepted a secret Japanese message containing plans for an attack on Midway Island and part of Alaska's Aleutian chain, all available aircraft in the Hawaiian command prepared for the attack.

As the Marines and Navy prepared their defenses for Midway, Tinker's Seventh Air Force also made plans. Tinker put forward his own ideas for a U.S. offen-

sive raid, knowing he had four LB-30s ("Liberator" bombers) on the runway at Hickam Field. During the battle, according to Crowder, the Seventh Air Force "carried out 16 B-17 attacks (55 sorties) and one torpedo attack by four B-26s...[claiming] 22 hits on ships and 10 enemy fighters shot down."

After Midway, Tinker prepared to lead a flight of "Liberator" bombers in a pre-dawn raid on Wake Island. They would go to Midway first and take on as much fuel as possible "so they could fly the 2,500 miles to Wake and return." He reasoned that such an attack would disrupt Japanese stability in the Central Pacific. It was a calculated risk, but one worth taking.

In the late evening of 5 June, four bombers—with Tinker aboard one of them—took off on the first leg of their journey, landing on Midway early the next morning. The bombers were filled with fuel and equipment was checked and rechecked. When darkness came, the planes lifted off, needing every foot of runway, and flew into an overcast at 6,000 feet. About 40 minutes later, Tinker's plane lagged, lost altitude, nosed into the overcast, and disappeared. Neither the plane nor any of its crew was ever seen again.

Crowder's book belongs in the library of every military enthusiast who is interested in what garrison life was like on an infantry post or an air base during the first half of the 20th century. And both groups would profit from reading about what happened in the Pacific, especially from an Air Force point of view, between the attack on Pearl Harbor and to the first week in June 1942.

Churchill's Deception: The Dark Secret That Destroyed Nazi Germany. By Louis C. Kilzer. Simon & Schuster, 1994. 335 Pages. \$23.00. Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army.

After Rudolf Hess's incredible and seemingly bizarre lone flight to Scotland on 10 May 1941, Adolf Hitler disavowed all knowledge of his deputy's action. He also said that Hess was "the victim of hallucinations" and his flight was the result

of "mental derangement."

But was it? Journalist and investigative reporter Louis C. Kilzer has shown—mainly through the synthesis of previously published items—that Hitler did everything possible to avoid war with Great Britain. One of the keystones of Hitler's political philosophy and foreign policy, as enunciated in *Mein Kampf*, was to coexist peacefully with Great Britain. Germany would allow Great Britain continued mastery of the seas and its colonies, in exchange for free rein to expand eastward in quest of *Lebensraum* (living space).

The September 1939 German and Soviet attack on Poland was followed by the "Phoney War" of inactivity. Behind the scenes, however, myriad negotiations took place involving neutral nations' businessmen, secret agents and soldiers, and Vatican representatives. After the May 1940 German blitzkrieg into France, Hitler apparently permitted the British Expeditionary Force to escape from Dunkirk as a sign of his continued willingness to make peace with Britain. Although the Germans bombed England, no serious invasion attempts were made. There was correspondence, purportedly between Hess and the aviator Duke of Hamilton, who was thought to be a leader of the British "Peace Party." (As the hereditary Lord Steward to the King, the Duke was thought to have special access to the monarch.) But Hess's letters were intercepted by the British Secret Intelligence Service (SIS), which responded encouragingly.

This, according to Kilzer, was "Churchill's Deception." But all this is nothing new. Richard Deacon's 1969 book, *A History of the British Secret Service* (a source not listed in Kilzer's bibliography), describes this ploy in detail. Deacon attributes the SIS ruse primarily to Ian Fleming—Assistant to the Director of Naval Intelligence and creator of James Bond—who masterminded an unofficial effort to supply Hess with bogus horoscopes. An unusual conjunction of planets was predicted for 10 May 1941, making this a highly propitious time for Hess to embark on his sanctioned peace mission.

Whereas Hitler undoubtedly knew of his protege's plans, there is much doubt that Churchill was privy to all the schemes

involved in luring Hess to England, as Kilzer asserts. The last German aerial blitz of England also took place the day of Hess's flight. With the apparent failure of Hess's mission, Hitler then turned his full attention to the east and attacked the Soviet Union the following month.

The book's dust jacket boasts that "Kilzer has uncovered documentation which exposes this great and untold story, adding a new dimension to the legacy of Winston Churchill." Although an interesting and fast-paced book, it cannot live up to this claim. Perhaps the greatest deception was one perpetrated upon the author himself, for believing—and wanting others to believe—that he was the first to reveal this "dark secret."

***Pacification: The American Struggle for Vietnam's Hearts and Minds.* By Richard A. Hunt. Westview Press, 1995. 352 Pages. \$34.95** Reviewed by Dr. Joe P. Dunn, Converse College.

Lyndon Johnson called it "the other war"; actually it was *the* war. Unless the government of South Vietnam could establish its legitimacy, provide security for the population and win the loyalty of the citizenry, the massive military effort was in vain. The various efforts over the years to "win hearts and minds" were referred to as "pacification." There are some excellent studies on the component elements of pacification or on the effort in a particular province, often by participants (such as the books by Eric Bergerud, Stuart Herrington, Orrin DeForest, Dale Andrade, William Colby, Robert Komer, John Cook, F.J. West, Jeffrey Race, and Thomas Scoville), but this is the first comprehensive study of the entire pacification effort.

The author of this book, Dr. Richard Hunt, served as an Army Captain with the Military Assistance Command, Vietnam (MACV) and has been with the Army's Center for Military History (CMH) since then. Years of research in the extensive archives of CMH, the Johnson Library, and other centers are the basis of this exhaustive account. Hunt details the rise of

insurgency and early pacification efforts by South Vietnamese and American military and civilian agencies; the origins of Civil Operations and Revolutionary Development Support (CORDS); its struggles, successes, and failures; evaluations of the various allied programs such as Phoenix; the interplay with the military effort; the end of the experiment; and the heritage of CORDS' unique blending of military and civilian programs and personnel.

Throughout the book, Hunt's assessments are judicious and well supported. In line with the earlier works by Dale Andrade and Orrin DeForest, he accurately describes the Phoenix program as one that never reached its maximum potential rather than the sinister caricature depicted by other commentators. Hunt considers CORDS a success and, for all its problems, a model for the future. But the problems with which it grappled were too much to overcome: the systematic problems of the South Vietnamese political culture and process, the intractableness and relentlessness of the enemy, and the misconceptions of the allied military effort. The coordinated pacification effort came too late, and it would have taken too long to achieve ultimate success. Even if the conditions had been better, the patience of the U.S. populace and the political support for the war inevitably would have been exhausted before the pacification effort could have achieved ultimate victory.

Pacification is not a book for the novice, nor is it the most exciting treatise on the war. But for serious students of the conflict, it is a model study and one of the best, most essential books I have read on the Vietnam War.

RECENT AND RECOMMENDED

***Getting it Right: American Military Reforms After Vietnam to the Gulf War and Beyond.* By James F. Dunnigan and Raymond M. Macedonia. (Published in hardcover in 1993.) William Morrow, 1995. 320 Pages. \$15.00, Softbound.**

***Prisoners of Honor: The Dreyfus Affair.* By David Levering Lewis. (Published in hardcover in 1973 by William Morrow.) Henry Holt, 1994. 346 Pages. \$12.00, Softbound.**

Shooting Blanks: War Making That Doesn't

***Work.* By Nicholas Scibetta. (Published in hardcover in 1991.) William Morrow, 1995. 513 Pages. \$15.00, Softbound.**

***Inside Hanoi's Secret Archives: Solving the MIA Mystery.* By Malcolm McConnell. Simon & Schuster, 1995. 462 Pages. \$25.00.**

***Mike Force.* By Lt. Col. L.H. "Bucky" Burruss, U.S.A., Retired. (Originally published in 1989.) Pocket Books, 1995. 256 Pages. \$5.50, Softbound.**

***Women Marines in the Korean War Era.* By Peter A. Soderbergh. Praeger, 1994. 216 Pages. \$45.00.**

***The Great Raid on Cabanatuan: Rescuing the Doomed Ghosts of Bataan and Corregidor.* By William B. Breuer. Wiley, 1994. 288 Pages. \$27.95.**

***Military Leaders of World War II.* By Walter Oleksy. American Profiles Series. Facts on File, 1994. 160 Pages. \$17.95.**

***Encyclopedia of Modern U.S. Military Weapons.* By Colonel Timothy M. Laur and Stephen L. Llanso. Edited by Walter J. Boyne. Berkeley, 1995. 496 Pages. \$39.95.**

***Nuts! The Battle of the Bulge: The Story and Photographs.* By Donald M. Goldstein, Katherine V. Dillon, and J. Michael Wenger. Brassey's, 1994. 192 Pages. \$30.00.**

***Confederate Raider: Raphael Semmes of the Alabama.* By John M. Taylor. Brassey's, 1994. 336 Pages. \$24.95.**

***Out of Uniform: A Career Transition Guide for Ex-Military Personnel.* By Harry N. Drier, Jr. NTC Publishing (4255 West Touhy Avenue, Lincolnwood, IL 60466-1975), 1995. 256 Pages. \$12.95, Softbound.**

***On Infantry.* By John A. English and Bruce I. Gudmundsson. (Revised edition of the 1984 softcover edition by John A. English, originally published as *A Perspective on Infantry* in 1981.) Praeger, 1994. 216 Pages. \$18.95, Softbound.**

***Thrilling Days in Army Life.* By General George A. Forsyth. (Originally published by Harper & Brothers, 1900.) University of Nebraska Press, 1994. 198 Pages. \$8.95, Softbound.**

***Rudder's Rangers: The True Story of the 2nd Ranger Battalion D-Day Combat Action.* By Ronald L. Lane. (Reissue of the 1979 edition.) Ranger Associates, Inc. (620 Douglas Avenue, Suite 1312, Altamonte Springs, FL 32714), 1995. 201 Pages. \$14.95, Softbound.**

***Through Hell and High Water: The Wartime Memories of a Junior Combat Infantry Officer.* By Lieutenant Colonel Leslie W. Bailey, U.S. Army, Retired. Vantage Press, 1994. 198 Pages. \$16.95, Hardcover.**

***Tail of the Storm.* By Alan Cockrell. University of Alabama Press, 1995. 248 Pages. \$24.95, Softbound.**

***United States Army Logistics: The Normandy Campaign, 1944.* By Steve R. Waddell. Contributions in Military Studies, Number 155. Greenwood, 1994. 216 Pages. \$55.00.**

***German Battle Tactics on the Russian Front, 1941-1945.* By Steven H. Newton. Schiffer Publications, Ltd. (77 Lower Valley Rd., Atglen, PA 19310), 1994. 272 Pages. \$24.95.**

***Richthofen: Beyond the Legend of the Red Baron.* By Peter Kilduff. John Wiley, 1994. 288 Pages. \$27.95.**

***When the Odds Were Even: The Vosges Mountains Campaign, October 1944-January 1945.* By Keith E. Bonn. Presidio, 1994. 288 Pages. \$24.95.**

***MIA Rescue: LRRP Manhunt in the Jungle.* By Kregg P.J. Jorgenson. Paladin, 1995. 280 Pages. \$29.95.**

From The Editor

KEEPING OUR BALANCE

Over the last several issues, we have run a good number of articles on the light infantry force and the issues that concern it. We have also focused on a number of other issues common to both light and heavy infantry. This is probably appropriate, given the role of light infantry in operations other than war, the experience gained from infantry operations in Somalia, and the common concerns in such areas as logistics, weapons, and training. But what about the heavy infantry force and its unique concerns such as tactics, gunnery, and logistical support of deployed units, to name but a few?

Bradley units were at the leading edge of the force during combat in the Gulf War, and today are deployed around the world, from Korea to Bosnia. The firepower and mobility of the Bradley will enable U.S. units to seize and retain the initiative against the toughest heavy forces the enemy can muster, and we need to make sure our soldiers and leaders are up to date on the latest training, doctrine, and equipment changes that affect the Bradley force. That is where INFANTRY Magazine comes in, and I need your help.

Assignments to light infantry units do not always prepare an officer for the challenges that he will face in a follow-on assignment to the mounted arm of our branch. To be sure, formal courses such as those for leaders, master gunners, and crew members of units equipped with Bradley Fighting Vehicles will go a long way toward bridging the gap, but the time available in the programs of instruction does not always allow for the discussion and exchange of ideas that can only come from experience, and INFANTRY offers the best forum in which to share that experience.

We have featured articles on lessons learned during the Gulf War, at the National Training Center, and at bases around the world, and we need more of them, particularly on the heavy infantry force. If INFANTRY is to remain an effective, relevant branch bulletin, it must continue to support the *entire* infantry force and present a balanced coverage of branch-related issues for our readers. Regardless of where you may be stationed, you have skills and knowledge that can be put to good use by your fellow infantrymen.

If you are reading this in a Korea-based Bradley unit, you have winter experience that your counterparts in Bosnia may need, and those of you already in Bosnia can use the pages of INFANTRY to pass along tips and recommendations that will help other members of the mounted infantry force prepare for similar possible deployments. But in order to do this, you need to write about it. If you have an idea for an article, write or call me, or if you already have a draft down on paper, send it to me and I'll read it and get back to you. That is how we can continue to assure our readers of a balanced format that will cover the needs and concerns of the U.S. Infantry, wherever they may be on the face of this turbulent world.

RAE

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